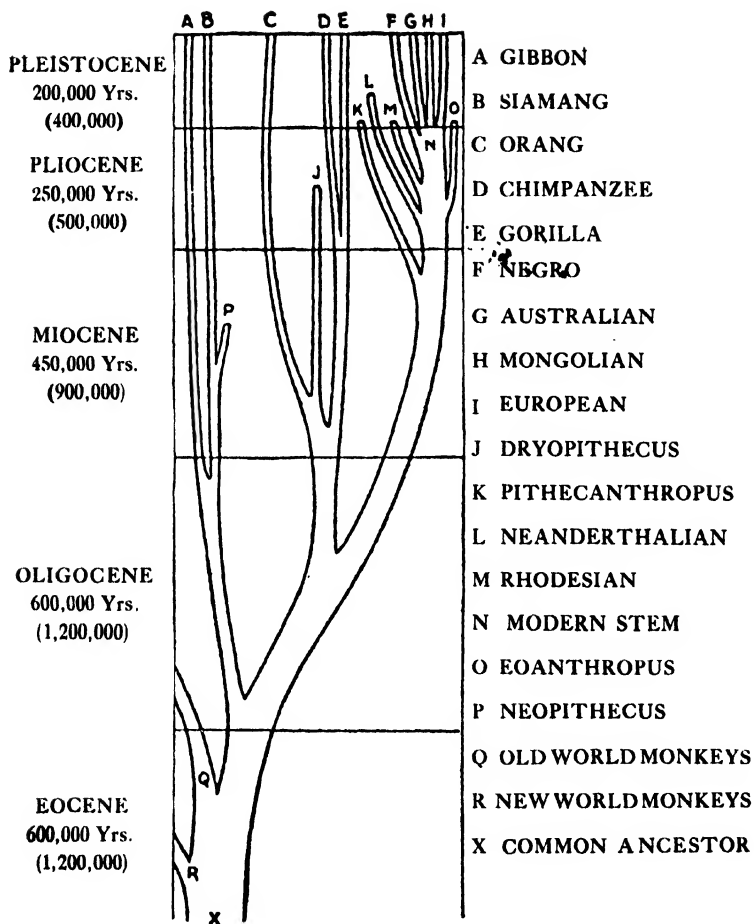


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HUMAN ANCESTRY.

The above diagram is copied (with minor simplifications and omissions) from the frontispiece to Sir Arthur Keith's *Antiquity of Man* (1925). The figures shown in brackets on the left-hand side are Professor W. J. Sollas' estimates of the several periods.

HUMAN ANCESTRY

and Other Essays

By M. S.

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Revised Edition.

CALCUTTA

1926

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306

CONTENTS.

	<i>Page.</i>
INTRODUCTION	1
HUMAN ANCESTRY	7
MAN AND CIVILIZATION	39
SCIENCE AND THE PAST	73
VANISHED CONTINENTS—	
I. Easter Island and the Pacific ..	93
II. Lost Atlantis	113

*From the grey and grim bethels of Science,
Squat, ugly, and meanly designed,
With its triple unholy alliance
Of Matter, Mechanics, and Mind,
That pretends with a ruler and compass
To plot out the soul of mankind,
From such arabesques dodecahedral,
Sham symbols of life and its lore,
I return to the old-world cathedral
That a new race of prophets restore,
Where the starved soul may wonder and worship
The visions it harboured of yore !*

CLOUDESLEY BRERETON,

INTRODUCTION.

ETHNOLOGISTS are curiously slow in adjusting their science to the conclusions of anthropology. In the days of Mannhardt and Tylor, when civilization was regarded as only some four or five thousand years old and it was currently supposed that a period not more than ten times as long had elapsed since humanity was represented by a forest ape, it was natural that the lower races should be looked upon as the near ancestors of the higher, and that the beginnings of morality and religion should be sought in the customs and superstitions of the savage. Indeed, it was long supposed that peoples were still extant who had not yet learnt to speak and were ignorant of fire-use, and the writings of Avebury and others of his school show that when the fast accumulating evidence proved its falsity, the belief was not abandoned without reluctance. Intrinsically, there was little to choose between such a conception of human evolution and the old Usherian notion that the world was created in B. C. 4004 and that all the arts and sciences had descended to us from the survivors of the Flood. It could not matter greatly to the wider conclusions whether man was regarded as 50,000 years old or only as 5,000. But although with the advance of knowledge these puerile estimates of human antiquity have been expanded, nothing has yet been done to readjust ethnological ideas to the larger scale.

If, as Sir Arthur Keith and other anthropologists tell us, it is two hundred thousand years since man even of the modern European type appeared on earth, what becomes of the accepted assumption that the lower savage is "primitive?" The epithet has ceased to bear any intelligible

meaning. If it is intended to imply that the condition of the Arunta as we now see him resembles that of our own ancestors of, say, eight or ten thousand years ago—and such is the major premiss of all ethnological reasoning—the absurdity is manifest. The twentieth century savage is every whit as modern as the twentieth century Englishman, and to argue from the present condition of the one to the past condition of the other is obvious fallacy. If anything can be certain in such speculations, it is that in physique, mental ability, and culture, the Indo-Germanic man of 10,000 years ago was no less dissimilar from the Papuan or Melanesian of that time than are their respective modern descendants. Nevertheless, the tradition of the Mannhardt-Tylor school is still maintained by Sir J. G. Frazer, Professor F. B. Jevons, and others, who do not scruple to ascribe a recent origin to beliefs which, if their assumptions be correct, must have been entertained by humanity for close upon a million years—and entertained by races of widely dissimilar capacity, history, and environment. It was not so very long, in Mannhardt's opinion, since men were so ignorant that they could not tell the difference between a woman and a tree,¹ while others have assured us that an oak-god was originally worshipped by the Indo-Germanic races, and only gradually supplanted by a sky-god, because the oak lay nearer to their field of vision than the sky! This was very well when science regarded man as the grandson of the anthropoid, but what are we to make of such notions now?

The truth is that science has been too long divorced from common sense. Deceived by anatomical resemblances which prove no more than a physical relationship, anthropology jumped to the conclusion that man is descended from a simian ancestry, and his culture was thenceforward interpreted in accordance with a theory which was

¹ Nro. 239, Berlin 1876.

never more than an assumption. But even a cursory examination of the features which distinguish man from the ape will shew that the theory is not only unable to account for human evolution but is blankly incompatible with the facts. Nothing but failure has attended the efforts to derive the specific human differentiae from simian models. No ingenuity can discover the germs of religion and morality in apedom. Language, whatever its origin, cannot possibly have been evolved out of animal grunts and howls. Fire-use is abhorrent to the whole of animate nature save only man, and it is monstrous to credit a semi-brute with so amazing an invention. To find any trace of agriculture in the lower world we must go to the insect kingdom, but even the Darwinian will shrink from suggesting that humanity inherited the art of tillage from the ant. In a word, nothing than distinguishes man from the ape can be recognized as a simian bequest, and the sources of the human differentiae must therefore be looked for in some other direction.

This question of cultural evolution is crucial. Man, it is universally acknowledged, owes his pre-eminence in Nature not to any bodily superiority—in strength and agility, indeed, he is greatly inferior to the anthropoid—but solely and wholly to his psychic capacity. It is his mind that has made him lord of all creation, and anthropologists themselves acknowledge that his mental gifts have been acquired at the expense of his muscles. Now all the specific human differentiae—religion, morality, language, fire-use, agriculture—are psychic attributes or connote psychic capacity, and these are the features that distinguish humanity from apedom. It follows that the secret of human as distinct from simian evolution can never be revealed by comparative anatomy but must be sought in the psychic or

metaphysical sphere. Victorian simplicity, which found no difficulty in regarding thought as the secretion of the brain, was conscious of no such necessity. Most of us have out-grown that primitive philosophy, but the man of science still lags behind and argues from surface similarities to noumenal identity. Once upon a time, he tells us in effect, there was a cart which rolled and rolled along, till in the course of centuries it gradually evolved a horse to draw it. And yet he has ceased to believe in miracle!

From the biological standpoint the evolution of man from the ape is nothing less than miracle of the most astounding order. It is a veritable creation *ex nihilo*; it can be ascribed to no known or imaginable cause; it has no parallel elsewhere in Nature. No such advance can be traced in the development of the dog, horse, elephant, or whatnot from their Miocene ancestors, but the anthropologist sees no unreason in lumping simian-human evolution into the same category. Lately, indeed, a dawning sense of the absurdity has begun to shew itself in scientific circles, and Professor Patrick Geddes, Sir Oliver Lodge, and others are timidly suggesting that human evolution is the fruit of conscious effort. Daily experience convinces us, in fact, that in the individual case effort towards self-improvement is the sole means of progress, nor has anyone yet explained why the rule should have been otherwise in the distant past. But to this very hour it is no small undertaking for a man to overcome his animal nature, even although he has partly transcended the animal condition. How stupendous an endeavour then must have been required of *Dryopithecus* or *Pithecanthropus* to raise himself out of sheer bestiality!

Effort, too, means psychic, not physical, causation—and what was the incentive that spurred the ape-man to this more than Herculean task?

No explanation is attempted, no theory advanced to account for the missing motive-power. The evolution of man from the simian is recorded as a fact without the scintilla of a suspicion that it is both unique in Nature and incredible. It is a tale of Hamlet without the Prince of Denmark, of locomotives without steam, arc-lights without electricity, motor-cars without petrol. Now recent advance in science is attributable primarily to a growing awareness of the complexity of Nature. Whether it be the formation of dew-drops or of atmospheric depressions, the law of gravity or the constitution of matter, research everywhere discloses an unsuspected intricacy in the phenomena and the old simple explanations have been discarded. Their place is taken by hypotheses of ever increasing subtlety, continually revised, reconsidered, and restated, until the imagination fails and theory evaporates into metaphysical disquisition. Only in the science of man and his civilization, the most impenetrable of all our problems, does the old happy simplicity persist. Man is a promoted ape, his civilization a development from savage culture- can any but a lunatic doubt it? Chemist, astronomer, electrician, and the rest have begun to realize the complexity of their problems and to adjust their speculations thereto; but the anthropologist still dwells serene in a world of obvious facts and self-evident explanations, all unconscious that he has trespassed into a land of the profoundest mystery. Time and education alone can enlarge his mind and convince him of his error.

Man as he interests his fellows is a psychic being, not a biped mammal, and to trace his true history therefore we must study his mental achievements, not his bones, arteries, and muscles. No doubt, psychic expression has always been limited and conditioned by physical equipment, just as it is to-day. So too

were Mendelssohn's sonatas and Wagner's operas limited and conditioned by the instruments at their command. But the student would make little progress towards understanding those compositions who restricted himself to tracing the development of the piano from the spinet or the violin from the lute, and others might suspect that he was prosecuting his inquiries in the wrong direction. The parallel to anthropological research, though not entirely fair, is close enough to define our meaning. In both cases the inquiry is vitiated by an *ignoratio elenchi*, the evidence is irrelevant, and the inferences are fallacious. What is needed is a theory of man *quâ* man, not *quâ* animal, and fossil bones can never supply the necessary data.

In the following papers we propose to consider human evolution from the cultural standpoint. It is necessary to begin by reviewing the irrationalities of current scientific doctrine and to prove that on the anthropologist's own showing the simian ancestor is a figment of the imagination. That is easily done, and if the reader will consent to be guided by reason instead of a *priori* assumption, he will find little difficulty in reversing the accustomed sequence and concluding that man is not the descendant but the parent of the ape. Accepted ideas as to human evolution will thus be transformed, and it will be seen that the facts of cultural development, irreconcilable with the scientific account of human origins, fall naturally into place in this alternative conception. Finally, the suspicion will arise that the traditional beliefs, could they be rightly understood, may not be so wide of the mark as science would have us suppose. The self-respecting man, at any rate, should welcome a pathway of escape out of a superstition which equally robs his past of dignity and reduces his hopes of futurity to despair.

HUMAN ANCESTRY.

1.

Works on anthropology commonly contain a plate depicting half-a-dozen simian, anthropoidal, and human skeletons arranged in an ascending series from monkey to man, and exhibiting their close anatomical resemblances. The plausible succession is designed to show that humanity traces its descent from some lowly tribe of anthropoids, and it was supposed for a time that the evolution was effected at no very distant date. Later research however, in particular the discovery of remains which proved that higher man was the contemporary of certain bestial savages, obliged the anthropologist to concede a greater antiquity to the human species, whose more advanced types are now admitted to have made their appearance on earth at least two hundred thousand years ago. But the main conclusion has remained unshaken, and the descent of humanity from some kind of ape is universally held by men of science as a truth beyond the possibility of question.

It may therefore seem audacious to declare that this well established doctrine rests on a simple fallacy, but such is in fact the case. Human descent as conceived by the anthropologist is set out in the diagram printed as our frontispiece, which has been copied with minor modifications from the new edition of Keith's *Antiquity of Man*. Monkeys, apes, and men are shown as collateral descendants from an unknown ancestor who inhabited this earth in the Eocene Age, three to five million years ago. Of this primeval parent were begotten first the New World monkeys, then the Old World monkeys, then the siamangs and gibbons, later still the great apes, and finally the various races of mankind, all being cousins more or less nearly related.

But the important question is, what was the nature of their common progenitor? Strange to say, no inquiry has been directed to the point. It is taken for granted that the original Primate must have been a simian. But this denizen of the Lower Eocene was a million years older than any ape and several hundred thousand years older than any monkey; that is to say, he dwelt on this earth for countless centuries before the simian type was evolved. How can he have been ape or monkey?

Evidently, then, the doctrine that men and apes are the offspring of a common simian ancestor asks us to regard the child as older than the parent. If Tom, Dick, and Harry are the sons of John, Dick cannot be Harry's father. It would be legitimate to speak of the common simian ancestor only if monkeys, apes, and men stood in direct lineal succession, but the notion is incompatible with the evidence and the anthropologist never tires of repudiating it. On the facts as stated the doctrine cannot be seriously entertained. It is a mere survival of Darwinian entheasm.

DARWINISM.

The simian ancestor owed his popularity to the philosophy current in scientific circles half a century ago. The then universal persuasion that mind was the by-product of matter and evolution an advance from atomic simplicity to molecular complexity led the biologist to look for an equally easy progression in the world of life. Monkeys standing lower than man in the scale of Nature, it followed of necessity that man had been developed from the anthropoid, just as the bird had been developed from the reptile, and the explanation of the process was found in natural selection working through the gradual accumulation and transmission of minute variations. But it presently became apparent that natural selection might

conserve but could never originate a variation, that minute variations are not accumulated, and that parents do not transmit acquired characters to their offspring. The Darwinian explanation was thrown into confusion, Continental biologists indeed pronouncing it fit only for the lumber room,¹ nor could all the ability of Spencer and Lewes save it from destruction. But partly because of the pride taken by his countrymen in Darwin's genius, chiefly because the old materialism still rules their thoughts, this reformation in ideas has been slow to impress itself on English men of science. They cannot conceive of any other kind of evolution than the mechanical succession which alone they regard as lawful. Epigenesis and mutation are suspect, purposive adaptation (though it can be witnessed in the laboratory) is resented, and even a partial subordination of matter to mind is felt to bear a disagreeable taint of teleology. No doubt, matter itself has dwindled to a metaphysical abstraction—but what is to become of science if we cannot trust our own five senses? Away from us these idle imaginings, and as for anthropology, let us stand fast by the manifest, the inevitable, the inexpugnable truth that man is descended from the ape! Nevertheless, the philosophy is false. The very idea of evolution is teleological,² while as for human origins, to what does man owe his supremacy if not to mental causes? There is an alternative theory of his parentage that has not yet suggested itself to the scientific brain. Anthropoid means like a man, not like an ape; may not humanity have descended from a different kind of man? The hypothesis at least deserves examination.

¹ Fleischmann, *Die Darwinische Theorie*, 339. The book was published in 1901.

² F. C. S. Schiller, *Riddles of the Sphinx*, 180; Arthur Thomson, *System of Animatic Nature*, 344; Oliver Lodge, *Making of Man*, 41, etc.

THE EOCENE ANCESTOR.

Dayton is so far in the right of it that the simian ancestor is not to be thought of as a logical possibility. Despite the vast period that has elapsed since the original Primate trod this earth, it is not difficult to arrive at some less irrational notion of his character. Sir Arthur Keith's diagram makes it abundantly clear that this long-vanished being, whatever else he may have been, was certainly neither ape nor monkey. If not human, he must have belonged to some extinct type in which the potentialities of all his descendants were combined, and the fact entails an important inference to which attention will presently be invited. But we have no right to assume a fourth unknown species until it has been shown that none of the others will meet the case. Man cannot be a promoted ape, but the ape may possibly be a degraded man, nor is it hard to prove that such is the necessary inference from the data. Even on the scientific showing the common ancestor contained at least the germs of humanity, and the fact is by itself enough to lift him out of the simian category. It is due to his dignity therefore that he should be spoken of as *Homo primigenius* instead of *Homosimius precursor*, and in future we shall use the name. Meanwhile, if it can be clearly apprehended that modern anthropology obliges us to conceive of the original Primate as possibly human but certainly non-simian, much will have been done towards ridding the world of an unhappy superstition.

2.

What then does the evidence require us to predicate of *Homo primigenius*? This much at any rate is beyond question; he was the superior of other early mammals in three important respects, namely, intelligence, vigour, and adaptability. These are all psychic qualities. The

first needs no emphasis, for the mental capacity which has enabled man to achieve his unchallenged supremacy over the rest of animate nature must have been noticeable even in his earliest origin. The Eocene Age was that in which the tiny cerebra of reptiles, birds, and fishes gave place to the larger brains of the mammalia, especially the Primates. It may thus be said to have witnessed the birth of intelligence, and our ancestor was in the forefront of the new development. Secondly, the progenitor of a race whose numbers far exceed those of any other mammal must have been blessed with exceptional vigour; and, thirdly, he must have surpassed his companions in the adaptability which has allowed his descendants to fill the earth and adjust themselves to the widest varieties of soil and climate. If these three qualities be regarded as the expression of a single gift, we may say that the Eocene ancestor was conspicuous above all other animals for his superabundant vitality.

So much for *Homo primigenius* himself. The next question is, in what relation do his descendants stand to him? In which of them is he most adequately represented—who are his rightful heirs? Sir Arthur Keith's diagram shews that in a number of cases—*Dryopithecus*, *Pithecanthropus*, *Eoanthropus*, the Neanderthalian, the Rhodesian, and others omitted from our copy for simplicity's sake—the stock came to an abrupt end. Discovery is steadily adding to the list of these extinct branches, the past year or two having brought us knowledge of the Taungs anthropoid (*Australopithecus*), which would probably be shewn as branching off from the parent stem between E and K. These creatures, together no doubt with many others of whom no trace survives, were in existence in the late Pliocene, as well as the extant simians and anthropoids, the four chief types of present-day human-

ity, and the recently extinct Tasmanian. But neither Neanderthal man, Piltdown man, Rhodesian man, nor Tasmanian man was the lineal ancestor of any extant race. They were offshoots from the main stem, like *Dryopithecus*, *Palaeopithecus*, and the others.

DEGENERATES AND FAILURES.

Now why did they become extinct? We cannot suppose that each of these various genera—and some of them were widely distributed—was swept off the earth by a special cataclysm. The only reasonable answer is that with which the Tasmanian supplies us. They died because they could not live, and they could not live because the ancestral vitality failed them. They decayed in intelligence, vigour, or adaptability—probably in all three, and Professor Arthur Thomson therefore calls them human failures. The answer is adequate, nor need we search for any other. We may take it then that these human failures were destroyed by natural selection, that is to say, by internal inability to cope with external exigencies. They had lost the pristine vitality and adaptability; they had fallen away from the ancestral standard and could no longer maintain themselves. In other words, we are led to the important conclusion that Neanderthal man and his fellows were *degenerates*.

But others besides the Neanderthalian, the Javan, and the Rhodesian must come within this category, first and foremost the Tasmanian, who has perished in our own times owing to the same failure of vitality. And not he alone, but all the backward peoples whose numbers are swiftly diminishing before the incursion of their civilized brethren and who must soon join the Tasmanian in extinction. There is reason to believe that the lower savages were decreasing in number long before the advent of the white man, nor can all the

care bestowed on them by missionaries and others retard their doom, but the detail is immaterial. None of them has preserved the vitality of their Eocene ancestor; they cannot even bear transplantation to a better environment. All therefore are degenerates, and some few thousand years hence, when Professor Keith's diagram comes to be redrawn, the Australians, Bushmen, Negritos, Veddahs, and other lowly peoples will be shewn along with the Tasmanians as having come to an end within our own epoch.

APES AND MONKEYS.

But the argument is not yet exhausted. If the lower savages are degenerates, so too must be the apes, the gibbons, and all the monkey tribe. The constitutional delicacy of these creatures is notorious, and they have so far forfeited their adaptability that they can no longer maintain themselves except within small—in the case of the apes very small—areas of the earth's surface. What descendants of the common ancestor shew so great a falling-off from his vigour, prolific power, and capacity of withstanding all sorts of climate as the sparse bands of gorillas, oranges, and chimpanzees occupying a few restricted spots in West Africa, Sumatra, and Borneo? Nearest to man in intelligence and physical confirmation, they are further from him in vitality and adaptability than almost any other mammal. In lesser degree the same may be said of the monkeys, whose diminution in intelligence is not compensated by their greater numbers and wider range, and who shew the same intolerance of change. Nor is it legitimate to credit them with greater physical resemblance to the common ancestor than their pithecoïd cousins, for they diverged from the parent stem at a time when the plasticity of form was at its maximum, and we have no means of knowing from what monstrous intercourse they

may not trace their descent. This much is clear, that in respect of the qualities which have enabled man to establish himself in Arctic snows, desolate plains, dense forests, storm-swept islands, bleak mountain ranges, and sweltering tropical valleys, the monkeys, apes, and lower savages have fallen far away from the ancestral level. They are all degenerates, and the fact is proved beyond the possibility of cavil when we remember that the ancestor possessed, but the apes and monkeys have lost, the potentialities now made manifest in higher man.

3.

It is a necessary inference from the foregoing considerations that at the present day the Eocene ancestor is better represented in higher humanity than in any of his other descendants. The conclusion is strongly supported by the evidence of anatomy and embryology. In *The Problem of Man's Ancestry*¹ the distinguished biologist Professor Wood Jones has pointed out that the Darwinians committed the mistake of arguing from the likenesses between human and simian anatomy and forgetting the equally important unlikenesses. Likenesses may be due to convergence, a tendency which produces similar modifications in unrelated animals subject to similar conditions of life. Comparison should therefore be restricted to carefully selected features and the likenesses checked by balancing them against the unlikenesses, but Huxley and his friends took no such precaution. Man, continues Mr. Wood Jones, differs from apes and monkeys in three general directions. He lacks certain simian specializations, he has developed distinctive characters of his own, and he has retained a large number of *primitive* features which the apes and monkeys have lost.

¹ A lecture delivered in 1918 and published by the S.P.C.K. in pamphlet form.

Without encumbering these papers with technicalities, it will suffice to say that the human tongue, nasal bones, kidneys, and vermiform appendix are far more primitive than those of the simians, and that in the disposition of certain arteries and muscles the human body approximates to some of the lower mammals rather than to the other Primates. Major Thomas Cherry, M. D., confirms these statements, adding that the development of our teeth conflicts with the theory of man's descent from the anthropoids and that in the important functions of growth and metabolism the human body is wholly different from that of the apes.¹ He joins with Messrs. Wood Jones, Langdon Brown, and others in finding our nearest living relative in *Tarsius*, a tiny little lemur descended from the Lower Eocene, at which remote epoch it had already gained its peculiar specializations; and Mr. Wood Jones further points out that whereas the anthropoids do not appear before the Miocene, man's nearer cousins *Parapithecus* and *Propliopithecus* occur in the Eocene, when man himself must have originated.

EMBRYOLOGY.

The embryological evidence is yet more significant. The belief that man's upright stature was a late acquisition is one of the inferences from assumption so common in modern science. It is contradicted by the development of the foot, says Mr. Wood Jones, the growth of the human foetus proving that our ancestors walked erect on their two feet as far back as we can trace their history. The quick appearance of the brain is even more important. The notion of human descent from the simian, writes Dr. W. H. Duckworth, "is not confirmed by the embryonic history of man, for there the growth of the brain is by far

¹ *Science Progress*, July 1920.

the most distinctive feature. The evidence indicates the early acquisition of a large and presumably active brain."¹ Humanity cannot have inherited this gift from any bestial ancestor. For some unstated reason Professor Keith makes little reference to the embryological evidence, merely noticing various anatomical features retained by adult man but present only during the foetal life of the ape. But he mentions one extremely significant fact, without however drawing the legitimate inference from it. "There is a close superficial resemblance," he writes, "between the skulls of man and anthropoid ape during infancy and childhood. *The brutal and distinguishing features appear on the ape's skull during the years of growth.*"² The fact is of cardinal importance. Unless the settled principles of embryology be cast aside, this late appearance of the distinctively brutal features is proof conclusive of their late acquisition. In other words, the development of the anthropoids shews that they are descended from a human or humanoid ancestor, from whom in the course of ages they have degenerated into their present bestiality.

It must appear then not only that man does not resemble the apes so closely as has been supposed, but that in many respects his body is more primitive than theirs. In particular, his large brain and upright stature have come down to him from his earliest ancestry, and in both of these features the anthropoids have fallen far away from the primeval standard. Almost without exception all the indubitably human remains hitherto discovered have been those of beings with a skull capacity about three times greater than that of the gorilla. In brief, the evidence all goes to shew that the mind to which man owes his preeminence is a bequest to him from the remotest

¹ *Prehistoric Man*, 7.

² *Antiquity of Man* (1925), 197.

past, while the late appearance of scowling brow and prognathous muzzle bears witness to the ape's degeneracy.

POISONING THE WELLS.

In view of these facts a strong protest must be uttered against the indefensible practice of publishing imaginary portraits designed to shew that the simian descent of man is established fact. A popular handbook issued a year ago contains a plate displaying photographs of three models—one of *Pithecanthropus*, one of Heidelberg man, and one of modern man—declaring rather than suggesting that the third is descended from the first through the second. Scientifically, and to the knowledge of those who prepare these plates, this is downright falsehood, but the ordinary reader does not know it and accepts the portraits as demonstration. "I find no occupation less worthy of the science of anthropology," writes Mr. Wood Jones, "than the not unfashionable business of modelling, painting, or drawing these nightmare products of imagination, and lending them in the process an utterly false value of apparent reality." It is a deliberate perversion of the truth, and the practice should be reprehended and proscribed by every man of science.

4.

Anthropology, anatomy, and embryology thus combine in proving that *Homo primigenius* was a being with large brain and upright stature, and that the simians have degenerated from this high ancestral level. We now turn to other sources of information.

According to a universal tradition our first parents were born into a happy land where they subsisted on the bounty of a generous Nature, and toil, sin, and suffering were unknown. The Hindu calls this remote epoch the Age of Truth, the Greek termed it the Golden Age, the Austra-

lian savage speaks of the Alcheringa time, the Bible of the Garden of Eden. Now in the Eocene Age this mythic paradise was an actual physical fact, not in some favoured corner of Mesopotamia, but throughout the whole wide world. Four million years ago the continents had not assumed their present lengthwise disposition but encircled our planet in two great belts divided by the Nummulitic Ocean.¹ The great mountain ranges had not reared their heads, the Glacial Ages with their extremes of heat and cold were unknown, and on both sides of the central ocean the climate was mild and genial. The dense forests of the tropics had not appeared, but the fig, almond, breadfruit, walnut, and other fruit-trees flourished abundantly. The monstrous reptiles of the Mesozoic Age—the dragons of the slime—had perished, the carnivora of the Miocene had not arrived, the great apes were yet unborn. All Nature was fertile, calm, and peaceful. The denizens of this delightful country, says the great Italian anthropologist Sergi, dwelt amid sylvan glades watered by running streams and filled with the music of song-birds, with fruit-trees laden with their tempting burden, in a kindly climate which knew not want or hardship.² In a word, the conditions everywhere were such as alone could have furnished a defenceless fruit-eater with a nursery in which his childhood could be fostered and protected. Such according to geology was the Eocene Age, four million years ago. Such according to tradition was the Garden of Eden four million years ago! But the one is science and the other superstition. ♦

SCIENCE AND TRADITION.

At this point our case may be supported by evidence so remarkable that it may fairly be

¹ The ensuing description is borrowed from Professor Scott Elliot's *Prehistoric Man and his Story*, 19f.

² *Ibid.* 85, 228.

called conclusive. A few years ago the duration of the ages that have elapsed since the appearance of mammalian life was roughly estimated by Professor W. J. Sollas. Two or three thousand years earlier the author of the Mahabharata made a similar estimate of the ages that had elapsed since the creation of man. We give both sets of figures :—

PROFESSOR SOLLAS.¹

Eocene-Oligocene Age	...	...	2,400,000 years
Miocene Age	...	...	900,000 "
Pliocene Age	...	...	500,000 "
Pleistocene Age	...	...	400,000 "
Total			4,200,000 years

MAHABHARATA.

Satya Yuga	...	...	1,728,000 years
Treta Yuga	...	...	1,296,000 "
Dvapara Yuga	...	...	864,000 "
Kali Yuga	..	...	432,000 "
Total			4,320,000 years

The close similarity between the two estimates, especially in the number of ages, the relative durations assigned to them, and the almost identical totals, is manifest on inspection. Surely this is evidence compared with which the whole array of artefacts and fossil bones is so much rubbish? How came Vyasa to anticipate our scientific conclusions in so recondite a matter, and whence can he have derived his knowledge if not from the storehouse of tradition? His figures are supported by the facts of anthropology, anatomy, and embryology, and inasmuch as no memory of the Eocene Age or of man's creation therein could have been preserved unless it were an actual record of the truth, the tradition bears all the marks of authentic history. When the

¹ The figures are taken from the first edition of the *Antiquity of Man*. In the later edition Sir Arthur Keith has reduced them by about one-half, without however assigning any convincing reason for the change.

coincidence in figures is corroborated by an equally exact description of the conditions of life in Eocene times, there is no choice but to recognize that we are dealing with forgotten science, and the mythical creation of man at the beginning of that epoch—at the very period selected by anthropology for the first appearance of the human ancestor—deserves to be treated with the respect due to profound knowledge.

The human ancestor was neither ape nor monkey; therefore he was man. If then no one has yet been able to locate his original home, it is because the Garden of Eden has been sought for in times two or three million years too late, and in this or that isolated corner of Asia instead of in the earth at large.

THE NEW-MAKING.

Nor is the evidence yet exhausted. More than one barbarous or savage people—the Aztecs in particular—have retained a clear recollection of the human failures. Not improbably the same tradition is recorded in the text, "There were giants in those days," for the word translated giants may also mean abortions or monsters, the progeny perhaps of the commerce between the sons of God and the daughters of men. Our nursery tale of Valentine and Orson—the animal-man is significantly called the Nameless one in the older versions—may be based on a reminiscence of *Australopithecus* or *Eoanthropus*. A piece of evidence hardly less striking than that of the *Mahabharata* is supplied by a tribe of Red Indian savages. Form was plastic when mammalian life appeared on earth,¹ so much so that the several stocks of simians, bovines, equines, canines, and so forth were able to differentiate themselves into the variegated but stable types of the present day. Memory of this primeval plasticity

¹ Avebury, *Prehistoric Times*, 565, etc.

is preserved in the Zuni Creation epic, which describes how all things were "formative" or "changeable-by-will-inclined" in the days of the New-making.¹ Berosus and other early mythographers hint at the same mysterious evolution, and even the wretched Arunta has a myth which teaches him that function preceded structure!

5.

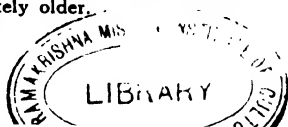
Form was plastic in the days of the New-making, and in the absence of anything to suggest the contrary, that distant epoch must be presumed to have witnessed man's differentiation into the strongly contrasted types now extant. Darwin could not account for it. As he pointed out, physically dissimilar races are found occupying similar environments and following similar modes of life, so that the differences cannot be ascribed to external conditions.² He hoped to find a partial explanation in sexual selection, but this is insufficient to meet the case; for beyond shewing a general susceptibility to sensual charms, the savage is not too particular in his amours. Sir Arthur Keith's diagram, in which the four main stocks now extant are shewn as dating from the close of the Pliocene, must not be misconstrued. It means that those stocks cannot have had any more recent origin, not necessarily that they were separated then. The origin of modern man is placed some hundred thousand years earlier—Professor Thomson is willing to date him from the Lower Miocene³—and as Keith himself regards the European as half a million years in advance of the Arunta,⁴ we must go back to the early Pliocene for their proximate common ancestor. Now all

¹ F. H. Cushing, *Zuni Creation Myths*, 388.

² *Descent of Man* (popular edition), 305f.

³ *System of Animate Nature*, 550. Undifferentiated humanity must of course be indefinitely older.

Antiquity of Man (1915), 500.



this is not only guess-work, but guess-work biased by the besetting determination of scientific men to restrict the antiquity of man within the lowest possible limits—a survival apparently of Bishop Usher's influence. The estimates therefore are minimal, nor can anything but prejudice be alleged against their extension. There is no reason why the four stocks should not have been differentiated in the Eocene Age, when form was capable of easy variation. The variability itself precludes all hope of discovering fossil bones belonging to that era, for plasticity implies a highly perishable skeleton, such as could not be expected to endure for more than a few hundred years. The evolution of man must have been at least as slow as that of the lower mammals, and in this as in other matters therefore science would do well to rely on reason instead of sense-evidence.

• THE DISPERSION.

The hypothesis that man existed in the Eocene Age not only accords with human differentiation but explains two other mysterious facts for which the counter-theory does not pretend to account. How came man to disperse himself about the earth, and what cause or causes led him first to abandon fruit-eating in favour of hunting, and then to abandon hunting in favour of agriculture? Our romances of *Homosimius* all start from the assumption of a feeble frugivorous mammal occupying some favoured region in Central Asia or elsewhere. Why did he leave it? His primeval home must have been genial and fertile, for he could not have maintained himself in any less kindly conditions; why then did he wander abroad to desolate regions of ice and snow, hot pestiferous forests, bleak deserts, lonely oceanic islands? If pressure of population forced him to emigrate (but neither apes nor monkeys are so affected), surely he would at least have confined

himself to places not wholly unlike that to which he was accustomed? But no; for some incomprehensible reason his near descendants set about establishing themselves in every corner of the earth, no matter how inclement or inhospitable. And having got there, they never thought of going away again!

IMPOSSIBLE JOURNEYS.

But how did they accomplish these extraordinary journeys? How did a set of infra-savages make their way from Mesopotamia to Greenland, Siberia, Alaska, Central Africa, the Fiji Islands, Tierra del Fuego, the Andamans, Japan? Like the apes to whom he is deemed so nearly related, the lower savage does not wander but abides always by his familiar home, amid the conditions to which he is accustomed.¹ He dares not wander indeed, for like the apes again transplantation to a different, even a better, environment is quickly fatal to him.² Why then did the Botocudo of tropical Brazil wander down to the ice-bound crags and precipices of Cape Horn, and how did he survive the change? Man crept over the earth, says Ayebury,³ but the airy evasion is neither science nor common sense. An archangel might fly but he certainly could not creep from Ireland to Iceland or from Samoa to Easter Island. That man was in occupation of all the earth before its surface assumed its present conformation is proved by his existing distribution, and it is gratifying to the writer that a view maintained for half a lifetime can at length claim some measure of scientific support. "We cannot account for the distribution of modern

¹ Prof. Sollas' statement to the contrary in *Ancient Hunters* in true only of the more advanced races.

² *Descent of Man*, 284 f. Changed conditions of life, says Darwin, seem to be the most potent of all causes of extinction

³ *Op. cit.* 563.

human racial types as seen at the dawn of history," writes Professor Keith, "unless we presume that they have been evolved in or near the regions of the earth which they now occupy, or did occupy at the beginning of historical times."¹ But Professor Keith again forgets to draw the inevitable inference from his conclusion. If the Polynesian race was evolved in or near the regions it now occupies, it must date from the time when Madagascar, the Pacific archipelagoes, Australia, and South America (where Polynesian remains have been discovered), all formed part of one great continent. That was in the Eocene Age, and we are again forced to the conclusion that man was then in existence. At the same time, this simple interpretation of the facts relieves us from the absurd notion of savages traversing immeasurable leagues in their frail canoes and founding colonies in places divided by fourteen thousand miles of stormy ocean.

6.

Applied to existing facts, Professor Keith's opinion that the various races of mankind have been evolved in or near the regions they now occupy provides the answer to more than one puzzle. The Polynesians must trace their origin to the time when South America, Easter Island, the Pacific archipelagoes, and Madagascar formed parts of the great southern continent called Lemuria or Gondwana Land, and supposed by geologists to have existed 20,000,000 years ago. The same derivation may be predicated of Australians, Papuans, Dravidians, Veddas, Minco-pies, the Semitic stock, the tribes of South America, and other peoples, while the Indo-Europeans, Mongolians, North Americans, and non-Semitic Asiatics would be assigned to the land lying north of the Nummulitic Ocean. The well-known divi-

¹ *Antiquity of Man*, preface to 1925 edition.

sion of mankind into two great races, dolichocephalic and brachycephalic, may be noted here, as well as recent investigations into the peculiarities exhibited by the blood of various nations, by which inquirers have been led to conclude that the northern peoples have descended from a different stock to the southern. But the migrations and interminglings of three million years have perplexed the problem beyond hope of solution by these methods, though the facts are undeniably suggestive. As for ultimate human origins, these lie beyond the ken of science. This only seems clear, that man's creation was effected by what Sir Arthur Keith calls the law of uniform or collateral evolution, a process by which (to use Darwin's words) "the whole body of individuals become altered together;"¹ more simply, mutation. But it is useless to speculate as to what the individuals were who were suddenly promoted into humanity. We only know that they were not apes.

A TERRIBLE FATE.

It is easy to understand that when Gondwana Land was rent asunder and engulfed by the tremendous cataclysms that ushered in the Miocene, the inhabitants were left clinging to any scrap of land where they could find a foothold and had no choice but to stay there. Their condition must have been wretched almost beyond conception. Plato has drawn the picture:—

"If we suppose that the cities of the plains and the sea-coast were utterly destroyed, none but a few hill shepherds escaping, must we not infer that all instruments and record of political and other matters also perished? . . . Human solitude must then have been unspeakably dreadful, and even if some few cattle and goats were saved there cannot have been enough to support the survivors. Memories of civil life and laws must have perished along with all knowledge of metallurgy."²

¹ *More Letters*, i. 379.

² *Legg*. 677.

Were such the fate of the Lemurians, what should we expect of their miserable descendants but what we see to-day—savages standing amid mysterious ruins, with nothing else to remind them of the past but the echoes of sublime faiths and grand cosmogonies still faintly audible in their traditions? The evidence of language shews that Polynesian knives and axes were once made of iron but have reverted to stone and shell, while in Hawaii and the Celebes the bow is becoming extinct, and in Ponape and New Guinea wooden vessels are even now superseding earthenware owing to the lack of suitable clay.¹ Change of environment has caused the degeneration. Not of his own will was man immured in the gloomy fastnesses of Cape Horn or marooned on remote oceanic islands. He was imprisoned there by overmastering compulsion, and his descendants have never been able to escape.

FRUIT AND FLESH.

Originally frugivorous (as we know from his dentition and digestive apparatus as well as from the practice of his simian cousins),² man presently took to meat-eating; a violent revolution in diet for which anthropologists confess themselves unable to account.³ Having taken to meat-eating, he presently changed over to agriculture; a second and equally violent revolution which equally baffles the learned imagination. And this double reversal of habit was accomplished twice over, independently in the Old World, independently in the New. Four miracles, all unexplained. On this subject as on so many others it is hard to persuade the man of science to "talk sense." It is or should be self-evident that agriculture is a natur-

¹ F. W. Christian, *Caroline Islands*, 129f.

² *Descent of Man*, 240; Owen, *Odontology*, i. 471, etc.

³ Scott Elliot, *op. cit.*, 226. No kind of explanation is suggested in *Ancient Hunters*; see p. 117.

al development from fruit-eating, such as an intelligent being could not fail to bring about. It is not less certain that necessity alone could force the change-over from fruit to meat-eating, and necessity here must mean failure of the ordinary food supply. Reason thus convinces us that man learnt the art of agriculture while still frugivorous, and that he resorted to meat-eating under the pressure of climatic changes which reduced or ruined his harvests. Why invoke four miracles—why have any miracles at all, when everything can be simply explained and nothing need be sacrificed but the relics of Victorian ignorance?

Deprived of his fruits and grain-crops by the cataclysms of the Miocene and the onset of the Glacial Ages, man was driven to keep body and soul together as best he might. In many regions the earth-products failed entirely and there was no alternative but to eat anything edible; in others, the scanty and impoverished harvests obliged the cultivator to supplement his diet in the same way. The pastoral habit followed in due course, but nowhere was the art of tillage wholly forgotten, and man returned to it whenever conditions permitted. But even grain is only a makeshift. To-day as in the distant Eocene fruit is man's natural food and still attracts him more than any other.

In this way the problems are resolved and we can understand the widespread tradition of the Flood, and why the Book of Genesis dates man's carnivorous habit from that great disaster. If then science would escape from her gratuitous miracles and frame an intelligible account of human evolution, she must get rid of *a priori* assumptions and consent to take her knowledge from those who knew.

7.

That the domestication of fire is the parent of all the arts and sciences will be generally acknowledged, and the ancients therefore ascribed the

feat to some divinely gifted being. Modernity however finds nothing paradoxical in attributing this, the greatest of all our conquests over Nature, to a creature more besottedly stupid than the stupidest living savage. Fire-use is known to all mankind, runs the argument; the various races cannot have invented it independently; therefore the art must have been acquired by non-differentiated man before the dispersion, at a time when he was more ape-like than any of his descendants.¹ We must accordingly credit the nascent ape-man with something indistinguishable from scientific genius. And not only with genius: with an amazing courage also, for all animal creation shrinks in terror from the leaping flame, and it was reserved for this semi-human brute to affront and subdue the monster. Truly a very gallant gentleman!

Pressing the inquiry further, we meet with many pleasing speculations as to the manner in which fire-use was suggested, whether by observing the effects of lightning, the sparks struck from flints, the incandescent matter vomited from volcanoes, or otherwise. But the question that first demands an answer is not the how but the why. Nothing but an incentive of overwhelming urgency can have driven our ape-man to undertake the heroic conquest; what was that incentive? As we have seen, he dwelt in a land where his wants were all supplied by a bounteous Nature; his fruits required no cooking, his frame no protection against the cold, nor is it suggested that he needed artificial light. Yet he mastered his abject animal terror and nerved himself to tame the raging flame—all for no imaginable reason!² These are grave difficulties, and until they have

¹ *Descent of Man*, 279.

² Needless to say, the art must have been rediscovered many times over and sedulously practised, before it could become universal property. This implies, not a single genius-hero, but a long succession of these gifted beings.

been resolved the sceptic may be pardoned for classing this scientific fire-myth with that other fable of Homosimius. In intellectual grasp no less than imaginative beauty it is far inferior to the tales of Maui and Prometheus.

LANGUAGE.

Yet graver perplexities surround the origin of speech. In the easy old Victorian days the problem hardly received a thought. Language was evidently a development from animal grunts and cries, nor was any proof needed of a theory logically involved in that of the ancestral simian. Euclid has taught us however to test the truth of an hypothesis by examining its implications, and to reject the one when the others are absurd. Applying this method to the problem, the science of language requires us to consider the following facts:—

In the first place, the roots which philology is obliged to take as its raw materials all express general, not particular, ideas, and such ideas are not to be ascribed to savages, much less to semi-human anthropoids.¹ Secondly, if the current theory were true, every language must shew greater simplicity in its earlier stages; but the facts disappoint the expectation. The further languages are followed back to their source, writes Dr. E. O. James, the more complicated they become; so far from running up into a general primordial type, they exhibit an increasing diversity.² Thirdly, it follows of necessity from the initial assumption, that the more ape-like the man, the more primitive must be his speech; but here again the facts quarrel with the theory. The cultured and intelligent Chinese, for example, uses an idiom cruder almost than that of any savage, while the miserable Arunta, scarce higher than the

¹ Max Muller, *Science of Language*, 373.

² *Introduction to Anthropology*, 252.

gorilla, chatters in a complicated grammar with three genders.¹ Or again, the Mawken of Malaya expresses himself with elementary simplicity, but his next-door neighbour the Makuchi enjoys a language as flexible as French or Greek.² Nor is it by any means the rule that the language of a people improves as those who speak it advance in civilization. On the contrary, among the most cultured modern nations as in ancient Greece and Rome, the idiom shews a distinct tendency to deteriorate concurrently with progress in other directions.

The difficulties are sufficiently formidable, but there is worse to come. On the one hand, if humanity learnt to speak before its dispersion from the primeval home, we have to account for the existence of more than two hundred linguistic stocks, no two of which can be derived from a common parent. On the other hand, if language was a later development, then we are required to believe, in the words of the distinguished American philologist Hale, that "suddenly and separately, with no common impulse or cause but at one time, all these scattered tribes which had existed for countless centuries without language fortuitously acquired the faculty of speech."³ Such an event, says Hale, might well be styled miraculous. But there is no way out of the dilemma.

ACCIDENT OR DESIGN?

It may fairly be said then that in fire-use and language-invention as in agriculture, the dispersion, and the differentiation, the simian ancestor breeds true to his congenital fallacy and produces a host of absurdities. It is impossible here to discuss the true derivation of fire-use and language,

¹ *Ibid.*

² W. G. White, *Sea Gypsies of Malaya*, 291. There are many parallel cases, e. g. among the Egyptians, the Lenguas of the Amazon, etc.

³ *Origin of Languages*, 6.

for it would be necessary first to shew (as the figures from the Mahabharata will have suggested) that antiquity knew the truth about these matters,¹ and a volume of preliminary explanations would be required before the myths of Prometheus, Hermes, and their kind could be made intelligible. With all its refined scholarship and antiquarian research modernity has not yet learnt the ABC of symbolism, much less of mythology. In regard to fire-use it can only be said that the invention is intimately connected with the origin of evil, an association which will suggest the extreme abstruseness of the subject. The origin of language is less difficult, and indeed the problem has already been solved in part by archaeology. Dr. J. D. Prince's *Materials for a Sumerian Lexicon*, Professor Hronzy's studies of Hittite inscriptions, and M. Victor Bérard's works on Homeric origins, coupled with the *Gorgias*, the *Cratylus*, the *De Mysteriis*, and other ancient writings, will put the inquirer on the track and convince him that whatever it may be now, language was not always a spontaneous growth. Words still in common use bear the marks of artificial manufacture on their face. *Religio*, both 'holding-back' and 'binding-together,' *natura*, the 'about-to-be' or eternal becoming, and the English word *man*, with its world-wide associations of mind and thinker, are the most familiar examples. Or shall we believe with the innocent Victorian that these compendiums of a profound philosophy were the accidental products of bestial ignorance?²

8.

It remains to consider man in his most characteristic aspect, that of a religious and moral being.

¹ See further *Science and the Past*, below.

² Words are still in active process of manufacture among many savage peoples. See Frazer, *Golden Bough* (abridged edition), 249—258.

In this respect he possesses capacities and tendencies of which no germ can be discovered in the ape: how have they affected his evolution? The question goes to the root of our inquiry.

Man apart, animate nature is static, changing indeed but nowhere shewing signs of advancing beyond the animal level. But man, if he has risen out of apedom, has accomplished a change of quality as well as of degree, and some extraordinary force or stimulus must have operated on him to produce such a result. Writing of biological variations, Dr. Schiller observes that it has not yet been explained—

“how the forces which resist any divergence from the normal combinations are occasionally overcome. It is useless to appeal to a calculus of probabilities as to a *deus ex machina* to help us out of the difficulty; we must recognize that every case of variation requires a definite and relatively very powerful force to produce it.”¹

But ordinary biological variations are small matters as compared with the changes involved in raising an ape into humanity. If it needed a relatively very powerful force to evolve say a four-toed breed of horses out of a five-toed breed, what stupendous energies must have been required to turn Homosimius into Homo sapiens! What was the magic that wrought this astounding miracle?

We spoke in our Introduction of the awakening of the modern mind to the extreme complexity of its problems. In the present instance the anthropologist has yet to realize that he is dealing with a miracle. He has left the mainspring out of his clockwork doll and does not see that the toy could never have budged an inch without it. Alone in creation, man has rebelled against his nature and essayed the audacious task of refining it into something higher. In part at least he has succeeded, having cultivated his brain, as Pro-

¹ *Riddles of the Sphinx*, 399.

fessor Scott Elliot bluntly puts it, at the expense of his belly.¹ But to this day the struggle against animalism is carried on with difficulty even by the most cultivated members of the race; are we really to believe that an all-but animal Homosimius can have undertaken or dreamt of undertaking such a task?

THE LAW OF PROGRESS.

It is waste of time to hunt for explanations of a miracle that never happened, and we turn instead from fancies to realities. The law of human progress is well known and well established. If man is still evolving—and science joins with scripture in acknowledging that “it doth not yet appear what we shall be”—there is only one path by which he can advance. He must continue to cultivate his higher faculties at the expense of the lower. Whatever their religious or irreligious leanings, all schools of opinion agree in inculcating the principle. No reward may be held out to the pupil but a strengthened self-respect, but Christian and agnostic, philosopher and rationalist, theologian and man of science, all join in urging him to fight the good fight and lay hold, if not on eternal life, at least on a dignity worthy of his manhood. The teachers speak from an unreasoned but imperative conviction, and the pupil’s own consciousness persuades him that they are right. Clearly then the key to our present and future evolution lies in this mysterious inner prompting; can it have been otherwise in the past? Unless the anthropologist is prepared to shew that at some crisis in the simian ancestor’s career he suddenly became subject to a newly instituted law of progress, he must consent to judge the past by the present and recognize that a million years ago no less than to-day man won his way upwards by means of mastering his

¹ *Prehistoric Man and his Story*, 80.

passions. Then as now, he advanced in just such measure as he obeyed his conscience. If so, natural selection, beneficial variations, survival of the fittest, and suchlike accessories had as little to do with human evolution as Napoleon's epaulettes with his military genius, and we must again conclude that Homosimius is a figment.

An inkling of the truth is working its way into scientific circles. Professor Sollas and M. Marcellin Boule have begun to suspect that evolution may be an affair of the mind;¹ Professor Arthur Thomson, Patrick Geddes, and others are timidly suggesting that man raised himself out of apedom by dint of effort guided by ideals.² But what can that effort have been if not moral endeavour, what the ideals if not those instilled by religion? How otherwise than by moral endeavour and religious ideals does the individual raise himself to-day? The stone that the builders rejected is again becoming the head of the corner. Religion, said Hegel, is the foundation and bond of nationality,³ Bachofen called it the sole efficient lever of civilization,⁴ while in our own time sceptical Reinach declares that "religion is the life of human society at its very inception, the mother of all the moralities and all the sciences."⁵ Religion therefore is the active principle in our evolution both individual and racial, and all our discoveries, inventions, and triumphs over Nature must be traced to its inspiration. Man has religion and

¹ *Ancient Hunters*, 570.

² "The real distinctiveness of man from his nearest allies depends on his power of building up general ideas and of controlling his conduct in relation to ideals;" Thomson and Geddes, *Evolution*, 99. "Behind us must lie vast periods of human endeavour"; *Antiquity of Man* (1925), 560; Lodge, *Making of Man*, 41; Julian Huxley in *Science and Civilization*, 304 f. etc. So also Sollas, *ubi supra*.

³ Quoted, Max Muller, *Science of Religion*, 148.

⁴ *Das Mutterrecht*, Introduction.

⁵ *Orpheus*, 34. The earliest form of society was the religious community; F. B. Jevons, *Introduction to the History of Religion*, 101.

rules the world; the ape has it not and can hardly maintain himself in his degradation. Nor does it need the example of Jacobin France and Bolshevik Russia to prove that without this, the greatest of all its gifts, humanity goes headlong to the dogs.

It is strange then that Tylor, Reinach, and others of their school should be content to derive religion from a hundred thousand years of medicine-man imposture. Fraud is a delicate plant at best, and to depict it as enduring throughout the ages and blossoming forth into flowers of truth and purity is to invite belief in yet another miracle. But these inquirers dwell in a world where men gather grapes of thorns and figs of thistles. "Turning everything upside down but most of all themselves" (to borrow Plato's phrase),¹ they regard idealism as proper to the ape, metaphysics as natural to the savage brain, chastity as the sublimation of promiscuity, altruism as the fruit of greedy selfishness; and forthwith declare the Universe unintelligible. It has not occurred to them that the difficulty may lie in their own assumptions, and like the anthropologist they have yet to appreciate the complexity of their problems. Nature loves to hide, said the ancients—*latet omne verum*, truth lies concealed at the bottom of the well. In simpler language, the obvious is never the true, and if the ancient maxim were inscribed upon the walls of all our classrooms, the world would be spared much infructuous speculation.

9.

The origin of religion is no more to be discovered than that of life, mind, or man himself, but it is otherwise with morality. Tradition teaches and probability suggests that morality is a mundane growth and that in part at least its

¹ Legg. 967d.

sources may be ascertained. It is the condition precedent of social life, and sociability is so characteristic of the Primates (except among the highly degenerate gorillas) and so necessary to their preservation, that that quality may safely be predicated of their common ancestor. Man is the most sociable of them all, but owing to his peculiar gift of self-conscious individuality, the altruistic instincts on which animal societies depend have been replaced in him by a sense of moral obligation which persuades him to the exercise of self-denial. This however could not by itself prevail against his selfish impulses, and even if it could, it would at most maintain him in a static condition as instinct does the animal. Morality affords no incentive to progress, no hopes, ambitions, or ideals, and man therefore would not be man were he not actuated by the mighty driving-force of religion.¹ It may be agreed however that man was non-moral on his first appearance on earth, and that bitter experience has taught him to shape his conduct according to the now firmly established laws of social life. It could never have taught him the beauty of self-sacrifice or inspired him to aim at advancement to a higher state of being, but let that pass. Our present point is that in drawing this picture of a non-moral being gradually acquiring a knowledge of right and wrong, anthropology is merely illustrating the story told in the Book of Genesis.

THE TWO VERSIONS.

The Primate ancestor, says science, lived in the Eocene Age when earth was a paradise; Adam, says the Bible, dwelt in the Garden of Eden. He did wrong and suffered for it, continues science;

¹ The fundamental alliance between religion and morality, doubted by the older ethnologists, is now admitted; Jevons, *op. cit.* 109f.; Lang, *Myth, Ritual, and Religion*, i. 336; Robertson Smith, *Religion of the Semites*, 53; F. M. Cornford, *From Religion to Philosophy*, 43; J. Estlin Carpenter, *Comparative Religion*, 197f, etc.

he ate of the Tree of Knowledge and was driven out of his happy garden, agrees the other. Tradition associates the penalty with the trespass, science does not, forgetting that punishment is the other half of crime.¹ Then we pass to the cataclysms of the early Miocene, described in the Bible as the Deluge, when the Primates must have saved themselves by taking refuge on rocks and mountain-tops, like Noah on Mount Ararat; and so to meat-eating and hunting, though here the scientific account lacks the logical sequence of the Biblical. Nevertheless, the two versions are curiously alike, the noticeable point being that religion knew all this before the time of Moses, whereas science is only just discovering it. Nor did the inspired writer commit the error of regarding man as grandchild of the ape and understating his antiquity by two or three million years, or of looking to vulgar imposture for the mainspring of his evolution. These, the contributions of science to the problem, help but little towards its solution, and an irreverent posterity may even set them down as mere *bêtises*. Where there is no vision the people perish, said Solomon, and recent experience has led Europe to suspect that there is deeper truth in that brief aphorism than in all her text-books on Comparative Religion.

CONCLUSION.

It is clear at any rate that the traditional version rests on a wider basis of fact and observation than its rival. Homosimius, we have seen, is born of bad logic. Applied to the specific differentiae between man and ape, the initial fallacy breeds a family of freaks not one of which can face the light. Whether it be the discovery of agriculture, the change from fruit to meat eating, the development of language, the invention of fire-use, or the dispersion and the differentiation,

¹ Hegel.

the procession of crazy assumptions and paralytic explanations suggests an infirmary let loose. When at last inquiry is directed to the motive-power behind it all, we are compelled to have recourse to that which science has been pleased to deride as a contemptible superstition, but which proves to be her own much wiser parent.

Such are the consequences of seeking to interpret human history in terms of animalism. The evidence has all been misconstrued in the interests of assumption; dispassionately considered, it converges with irresistible force on the same conclusion. Anthropology declares in no uncertain tones that man is not descended from the ape. Anatomy shews us a human body in some respects more primitive than the simian. Embryology points on the one hand to a primeval ancestor with large brain and upright stature, on the other, to a rabble of degenerate descendants in monkeys, apes, and human failures. Intelligent, vigorous, and adaptable, the true heirs of this wonderful being must be sought, not in the sparse bands of anthropoids skulking in tropical jungles or savages whose dwindling numbers proclaim their fast failing vitality, but in the masters of the earth—the intelligent, vigorous, and adaptable peoples who have spread themselves throughout the world and lead the van of civilization. In these there may be discerned a spark of something divine, and antiquity therefore called them children of God. The alternative opinion styles them spawn of the anthropoid, and its advocates pride themselves on their supposed descent. Yet even these may acknowledge that in safeguarding the dignity of our race and warranting the hope that man shall hereafter rise to something higher the ancient theory is preferable to the modern. Whether it be not also the more scientific, it is for the reader to decide.

MAN AND CIVILIZATION.

1.

It is a notable characteristic of the scientific mind that the more abstruse a problem, the greater its confidence in propounding the solution. In relatively simple questions, such as the nature of matter, the origin of the moon, or the age of the earth, there is no end to the theories approved and disavowed by each succeeding generation; but in the recondite phenomena of life and mind any plausible speculation passes muster as the true and final explanation of the mystery. Take instinct, for example. From that highly educative work the *Encyclopædia Britannica* for 1875¹ the student will learn that the problem offered no difficulty to our grandfathers. Instinct, wrote the great naturalist Romanes, was either lapsed intelligence—the stereotyping of mental activities once purposive—or else the preservation by natural selection of actions which happened to be beneficial to the animals performing them. In which of these categories he would have classed the migratory instinct of the eel or the premonitory weather sense of the beaver, is not clear; and since the theory depended on the now abandoned belief in the transmissibility of acquired characters, it does not greatly matter. But Romanes declared that his doctrine “served very satisfactorily to explain nearly all the enormous number of instincts with which we are acquainted,” and the few cases which it failed to cover would soon be brought into line by exact observation. That the whole speculation rested on a false assumption, the naturalist did not suspect, still less that he knew nothing whatever about the subject on which he dogmatized. It was learned ignorance of this type that made Fabre despair of his contemporaries.

¹ xiii. 157.

EASY EXPLANATIONS.

In questions relating to man the complexity is indefinitely greater, but scientific self-confidence increases rather than diminishes. The man who doubts his lineal descent from the ape is accounted a superstitious fool; nevertheless, it is a doctrine born of bad logic and worse philosophy. Or again as to marriage; it seems so certain that the custom must have been preceded by sexual promiscuity that the question is not thought worth arguing. Nothing is needed but theories—of which there is no lack—to explain how the one system gave place to the other. But more cautious inquirers have pointed out that the facts conflict with the hypothesis. If it were true, sexual relations among the backward races must grow simpler the more nearly they approach to the animal condition; whereas the lowest of all known savages have fettered themselves with marriage rules of such bewildering intricacy that it takes the European half a lifetime to understand them. It is only in high civilization that first cousins intermarry and humanity contents itself with a five minutes' ceremony before a registrar. Moreover, no society practising promiscuity has ever yet been discovered, and the ethnologist has therefore incurred the charge of inferring his facts from his theory. The same easy method has enabled him to ignore the evidence and derive articulate speech from animal grunts and howls. It is what is called inductive reasoning, and scientific literature teems with illustrations of its power.

CIVILIZATION.

Then as to civilization, is any man so wrong-headed as to deny that it is an evolution from savage culture? Writing in the current *Encyclopædia Britannica*,¹ Dr. H. S. Williams easily explains its origin. The metamorphosis from "beast-

¹ vi. 403.

like savage to cultured civilian," he says, was effected by accumulated changes that found their initial impulse in half a dozen practical inventions made by a pre-troglodytic race "possessed of no arts or crafts whatever—not even of the knowledge of the rudest implement." Needless to say, he describes the explanation as "absurdly simple," nor are we concerned to deny it either simplicity or absurdity. Dr. Williams has not grasped the problem. What has to be explained is the mental development which made invention possible, and he merely repeats the myth of the cart rolling along until it evolved a horse to draw it. We are not only asked to conceive something as evolving out of nothing, but to disregard the facts of history and experience. No race has ever been known to rise out of savagery by its own unaided efforts. The lower savages have remained stationary in their present condition from time immemorial. They show no tendency to advance and no capacity whatever for civilization, from which indeed they recoil into swift extinction. They cannot even bear transplantation from their wretched homes, but die incontinently when removed to a new and better environment. But what does all that matter? Civilization must have had some origin, and what other can you imagine? Would you set back the hands of the clock and scrap all this magnificent speculation?

Clocks however are useless unless they obey their master the Sun, and when they start recording summer-times of their own, their works need cleaning. The extreme obscurity of questions relating to human evolution should have warned our men of science that in these matters above all others theory must wait upon meticulous inquiry and patient accumulation of evidence—indeed, that even a remote approximation to the truth was not to be expected of the inductive method within,

shall we say, some forty or fifty thousand years. Undeterred by this obvious reflection, the Victorians plunged into their recondite subjects from the vantage-ground of half a century's superficial knowledge, and emerged a few minutes later with all the treasures of the deep clasped in their eager hands. But their heirs have begun to realize that this pleasing *trouvaille* of mud and seaweed has come from very shallow waters.

2.

Induction from assumption has many fascinations, but it is a safer method to put hypothesis on one side and attend to facts. It is now acknowledged that nineteenth century notions as to the antiquity of civilization, then supposed to have originated about three thousand years before Christ, were no better than puerile. Archæologists have recognized the existence of civilizations in the Nile valley dating back to B. C. 30,000,¹ and it is stated of various peoples raised out of savagery in historical times—our own British ancestors, for example—that they had fallen away from an older and higher culture. Secondly, all historical civilizations, with one or two exceptions, are known to have been derived from earlier cultures. Civilization, says Tylor, is a plant more often propagated than developed;² it would be better to say that it is always propagated and never developed. In the excepted cases—that of China is the most important—absence of evidence is not disproof, and analogy suggests that here also an antecedent civilization should be presumed. Thirdly, there is no sign of the steady onward progress from savagery through barbarism to enlightenment such as the Victorian assumed, no regular advance in the arts and sciences of life. The

¹ Lecture delivered by Sir Flinders Petrie before the Manchester Egyptian and Oriental Society, May, 1919. See also La'ng, *Human Origins*, ch. viii.

² *Primitive Culture*, i. 53.

daughter civilization has not always surpassed her parent, and when she has, the ground won has presently been lost again. In many cases the degeneration is notorious, and the remains of Egypt, Mesopotamia, and other countries bear witness to a secular decadence tending towards the extinction that overtook the vanished polities of Central Asia. Fourthly, Sir Arthur Keith admits that man of the modern European type may have existed in the Pliocene Age;¹ and finally, of no period since humanity arrived on earth can it be affirmed with certainty that civilization *was* not.

What do these facts suggest? We know that the old easy sequence of apedom-savagery-barbarism-civilization was pure delusion. "In our first youthful burst of Darwinianism," writes Professor Keith,

"we pictured our evolution as a simple procession of forms leading from ape to man. But the problems of human origins have become more complex, and their solution more intricate and difficult. The world of ancient man was apparently more complex than the highly variegated one of modern times."²

We must therefore think of a prehistoric earth peopled by societies of all kinds, some primitive, some highly organized, others standing midway between, the more fully developed proceeding towards ultimate extinction but handing on their achievements to worthy or unworthy successors. Such in fact is the picture presented to us as the result of recent archaeological research in Egypt, Mesopotamia, and the Ægean, in Mexico, Peru, and Yucatan.³ Now civilization is nothing but a function or expression of the mind, and the mental powers of any race may

¹ *Antiquity of Man* (1915), 187, 189, 301, etc.

² *Ibid.*, 209.

³ If writing is the sign-manual of civilization, then must the higher culture be conceded not only to prehistoric Egypt, Babylonia, Crete, China, and America, but to ancient Oceania and even perhaps to some long-vanished Australian polity. See below, p. 97.

be fairly gauged from the size and conformation of their skulls. Starting then from a people of the modern European type inhabiting this planet 200,000—400,000 years ago, we must infer that the capacity for high civilization was not wanting even at that remote date, and the question must be asked, how long could such a people exist without evolving a culture adequate to their needs and talents? Beyond all doubt they would quickly outdistance the Arunta and the Bushman, the Negrito and the Papuan. Where would they stop—why should they stop at all before they had attained our own exalted level? Two hundred thousand years is a long time, and we know that even within the last thirty or forty centuries many great civilizations have waxed and waned. What right have we to restrict this process to the tiny fraction of human history of which we have definite record?

EARLY TRADITIONS.

That record extends further back than archæologists are yet willing to allow. The Egyptian priests told Herodotus that their annals covered 32,000 years,¹ a period in close correspondence with Sir Flinders Petrie's estimate of the age of the Nilotic civilizations. According to Cicero, the Egyptians put forward a far more extraordinary claim, maintaining that they had exact records reaching back over no fewer than 470,000 years!² But here again the figure almost tallies with the antiquity predicated by Professor Keith of European man. There is no necessary incompatibility between the 32,000 years and the 470,000, if the one be taken as referring to Egyptian history and the other to African or Asiatic history, and the two coincidences with archæologist and anthropologist are more than

¹ ii. 43. 145.

² *De Divin.* i. 19.

suggestive. In any case, we have on the one hand a probability, confirmed by an ancient and quite independent tradition, that civilization dates back almost to the Pliocene Age, when civilizable man was occupying this planet. On the other hand, we see an archæology timidly shaking itself free from Bishop Usher's limitations, already conceding the lesser Egyptian claim, but quite unable to pause there and affirm that the *terminus a quo* has been ascertained. At the one end, civilization reaching back; at the other, civilizable man reaching forward. Add to this the fact that all culture has almost certainly been derived from pre-existent culture, and the gap between the two Egyptian estimates is spanned.

Thus far, reasonable inference from the evidence suggests that civilization has an antiquity of not less than four or five hundred thousand years. Sir Flinders Petrie and Sir Arthur Keith have joined hands with the Egyptian priests, and there is no gainsaying the force of the combination. The inference will now be confirmed by facts and arguments of another kind, when the difficulties arising from what may be called the implement record—celts, scrapers, arrow-heads, and so forth—will be examined.

3.

Ethnologists have fallen into the error of regarding civilization as something independent of the mind—a kind of chance fungoid growth bearing no necessary relation to the society on which it fastens. That latest and most learned of professors Dr. C. Elliot Smith describes it as an unwholesome parasite.

"It is essential that I should impress upon you," he writes of civilization, "its arbitrary character and the artificial nature of its composition. It bears the impress of wholly accidental origin; it is equally alien to the instinctive tendencies of human beings."¹

¹ *Primitive Man*, 41.

Science undiluted by common sense produces strange intoxications. Mannhardt, the founder of ethnology, declared that in the not very distant past our human ancestors were so ignorant that they could not tell a woman from a tree.¹ Dr. Elliot Smith, who can hardly mean to deny that man is a social animal, forgets that all social life imposes a restraint on the instinctive tendencies of the individual. Animal societies, especially among the insects, exhibit a very rigorous discipline, demanding absolute and unhesitating self-sacrifice of their members; and if civilization is arbitrary, artificial, and accidental, must we not say the same of the bee-hive, the ant-heap, the beaver's hut, even the tiger's lair?

THE IMPLEMENT RECORD.

Culture is specific to man. Its form is determined by the two factors of mental capacity and physical environment, and that it needs centuries or millennia of settled life before it can reach maturity is proof conclusive of its naturalness. It is a mode of self-expression—rather, indeed, the synthesis of all such modes—and its form and manner depend on subjective qualities limited by objective conditions. When therefore the objection is raised that there are no tangible relics to suggest the existence of a primitive civilization, and that archaeological remains display a steady recession towards crude simplicity, there is more than one sufficient answer. In the first place, it will be noticed that small implements of stone such as celts and arrowheads are far more durable than any of our civilized manufactures. With the trifling exception of cut precious stones, modern humanity produces not one article likely to endure for more than a few thousand years. Glass perhaps, especially that which is used for soda-water bottles, is the

¹ *Supra* p. 2.

least perishable of our creations, but five minutes' stroll along an English beach will shew how quickly it is disintegrated by the action of natural forces. The absence of tangible relics therefore affords no presumption against archaic civilization, even if logic permitted us to base positive conclusions on negative evidence. Interpose a period of great natural cataclysms such as those which divided the Eocene from the Miocene, and fifteen or twenty thousand years hence nothing would remain to testify of modern civilization—nothing but Tasmanian celts and African arrow-heads. As we shall presently see, antiquity has bequeathed to us remains of a far higher order than any instrument of stone, glass, or metal—remains moreover, of which it can be said with certainty that they have come down to us from the remotest past, and which prove that our early ancestors were anything but brutal savages. The supposed recession towards simplicity might furnish a better argument, were the evidence continuous and consistent. But it is interrupted by a remarkable break. Neolithic man may have been a better artisan than his palaeolithic predecessor, but as an artist he was immeasurably his inferior. The chance that has preserved the Dordogne paintings proves that their creators were men of high artistic genius, so much so indeed that it has been doubted whether any modern people has produced their equals. Men capable of such masterly work must have been capable of other equally high accomplishment, and even though their scrapers were not so well fashioned as those of their successors, do not the artists rank higher than the stone-masons?

CIVILIZATION AND CULTURE.

But the objection may be better answered by inquiring into the meaning of our terms. What is civilization—what are we to understand by the

word? All will agree that it is culture in its highest form, an expression on the modern Indo-European level of the same interior compulsion that shews itself in Papuan hut or Eskimo canoe. The word however is used of the European and not of the savage, but humanity exhibits many intermediate stages of culture, nor is it possible to draw any clear line and say that here the lower ends and the higher begins. Definition therefore is not to be attempted, and indeed the average man seldom reflects upon the meaning of a word that is constantly on his lips. Dr. H. S. Williams declines to distinguish between the lower and the higher culture. Like other ethnologists he dates the origin of civilization from the invention of writing. But this does not greatly help us, for writing itself has no known origin and indeed was familiar not only to barbarism but to certain peoples now classed as savages.¹ Tylor describes civilization as the general improvement of mankind by the higher organization of the individual and of society, to the end of promoting goodness, power, and happiness, remarking further that modern civilization is a matter chiefly of material and intellectual progress.² How far goodness and happiness have thus been promoted will seem doubtful to a generation that has witnessed the horrors of Verdun, Passchendaele, and Bolshevik Russia, to say nothing of the passionate pursuit of wealth in Europe and America, or the crime, disease, and misery that befoul our great cities.

THE IRON AGE.

War itself bears marks of relatively recent origin. According to Mr. Havelock Ellis it began late in human history, being fostered on the one hand by the attractions of booty and on the other by the assemblage of large populations in confined areas, and greatly stimulated by the employment

¹ *Infra*, p. 97.

Primitive Culture, i, 27.

of iron.¹ Palæolithic weapons suggest hunting rather than fighting, and it is many years since Max Muller pointed out that there are few war-words common to the Indo-Germanic languages but many pertaining to the arts of peace. Homer has scant respect for Ares, Mars was originally a god of agriculture. Kropotkin tells us that contrary to received opinion the savage is not prone to warfare,² and even Dr. Elliot Smith acknowledges that man took to war from greed of wealth and power.³ He has taken to science and commerce for much the same reason, and the Hohenzollerns made no secret of it. Now these three pursuits are the distinctive features of modern civilization. All are directly dependent upon steel, and there is point therefore in the ancient description of our epoch as the Age of Iron. If then there were civilizations upon earth for many thousands of years before iron came into general use, should we not expect them to have been of a different character from our own?

THE TRUE TEST.

The vital question, however, is whether civilization is of the mind or of the body. Tylor, to whom civilization meant little but social organization, never thought of making the inquiry. Organization is the effect of the civilized mind applying itself to the betterment of social life—and making a sad mess of the job. If it afforded any true criterion of human progress, we should have to place the elaborately organized armies of the Kaiser higher in the scale than their defenceless victims, and Nero's *delatores* than the Christians they betrayed. The American writer who defined civilization as the getting rid of our prejudices was not so wide of the mark. It is an affair of the

¹ Quoted. Thomson, *System of Animate Nature*, 311.

² *Mutual Aid*, 83.

³ *Primitive Man*, 48.

mind, and its level must be gauged by the character and mental breadth of its creators. Now our judgment of a man's value turns chiefly on moral considerations, taking comparatively little account of his intellectual gifts and none at all of his material possessions. He is esteemed for trustworthiness, courage, generosity, and fairmindedness more than for cleverness, mathematical ability, or manual dexterity, and (except among the degenerates) not at all for his handsome villa or luxurious private yacht. Must not the test be the same for the society as for the individuals who compose it? In which then should Englishmen or Americans take the greater pride—in the wealth and power of their respective countries, or in the idealism which led the one to abolish slavery and the other to prohibit alcohol?

Modern civilization is almost entirely the product of matter and mathematics, a combination, according to Bergson, which yields anything but fortunate results. The French philosopher's judgment has been borne out by the horrors that have lately devastated Europe and the impending ruin that threatens her peoples. Is there then no other kind of civilization—no *better* kind? If man is something greater than a calculating machine, if he nurtures higher hopes than foretelling eclipses, extending facilities of trade and travel, and manufacturing gramophones, poison-gas, bombs, and cinema films, may it not be that he has allowed his energies to be diverted away from their true object to these unworthier ambitions? There can be little hesitation as to the answer, the less because those whom humanity regards as the noblest products of its evolution, those therefore whose counsels it holds in the highest reverence, have set before it a widely different type of culture, so different indeed that civilized man is acutely conscious of the discrepancy between his practice and his aspirations.

4.

The intimate connexion between civilization and religion, unsuspected by early superficiality, has at length forced its way into recognition. Religion, says Lord Acton, is the first of human concerns,¹ Reinach, a sceptic of the sceptics, describes it as the life of human society at its very inception, the mother of all the moralities and all the sciences. It furnishes the sole bond and foundation of nationality, writes Max Muller, following Hegel and Schelling; and Bachhofen calls it the supreme department, the only efficient lever of civilization. Even Victorian ethnology is fain to add its testimony, F. B. Jevons remarking that the earliest form of society was the religious community, and Sir J. G. Frazer admitting that social organization has made the greatest advance in those parts of Australia which exhibit the germs of religion.² Robertson Smith, Lang, Carpenter, and other authorities might be quoted to the same effect but the evidence need not be multiplied. For morality, or the observance of a sound social code, is obviously the first condition of social life, and inasmuch as men of science are now agreed that morality has always been inseparable from religion—that which both ‘binds back’ and ‘gathers together’—the case needs no further proof.

RELIGION AND ENVIRONMENT.

Now plain living and high thinking have always been complementary. The continually stuffed body cannot see hidden things, says an admirable Zulu proverb, and experience assures us that the lower interests can only be cultivated at the expense of the higher. When a race or nation is placed in an environment where Nature is unkindly and attention is concentrated on the provision

¹ *Lectures on Modern History*, 8. References to the succeeding quotations are given at p. 34 above.

² *The Magic Art* (2nd edition), 72n. The note has disappeared from later editions.

of food, clothes, and housing, the material needs assume undue prominence and the higher ideals are inevitably neglected. Such is the hard fate of the northern peoples, whose inclination to materialism is the direct result of their geographical situation. Conversely, the nations who enjoy a more genial sky and whose bodily wants are more easily satisfied have greater leisure to attend to things of the mind. Free from the continual pressure exerted on the northerly peoples by their harsher climate, the southerly tend less towards material development and more towards philosophical and religious speculation. Naturally therefore the great religions have all originated in tropical or semi-tropical countries, for conditions in the colder regions preclude the growth of that rarest of all forms of genius, the mind of true spiritual vision. Asia has accordingly begotten the Law-giver, the Christ, the Buddha, and the Prophet, while Europe can furnish nothing better than Spencer's agnosticism or Nietzsche's pessimism. But by universal consent the eastern or southerly philosophers penetrated far more deeply into the heart of things than the western or northerly, and it is eastern influence therefore that reigns supreme in all our thoughts. And the discrepancy between European practice and aspiration is due to the wide difference between the two types of culture, for eastern ideals, always difficult of fulfilment, are largely incompatible with western environment.

PRECEPT AND PRACTICE.

Christianity, an offshoot of Palestinian Judaism characterized by all the marks of its Oriental provenance, is the acknowledged religion of the western world, whose civilization is based on the teachings of the Man of Galilee, and whose peoples pay the deepest reverence to His commands. But the pressure of environment has

made obedience to those commands so difficult that few can render it. Nevertheless, the commands are absolute, and difficulty of compliance, though it may palliate failure, cannot excuse any deliberate disobedience, the less because experience proves that the maxims of the Sermon on the Mount are scientifically exact guides to the higher evolution of humanity. In what respect then does modern civilization transgress against the ideals of the Gospels? If it fails to comply with those ideals in almost every particular, we must conclude not only that pressure or circumstances has forced Europe out of the true path of progress, but that her children are doomed to perish unless they mend their ways. For the biological truth and necessity of the Gospel doctrine, obscured for a time by Victorian nescience, is now acknowledged, and the nations that reject it cannot long survive. Now man has maintained himself on earth for many hundred thousand years, and the fact is proof presumptive that in his earlier days he trod some less perilous path. The inference is confirmed by the fact that war, science, and commerce, the three distinctive marks of modern culture, are of relatively recent origin, the great development of mechanics, mathematics and (especially) the arts of wholesale murder, dating from the transfer of civilization from Middle Asia and the Mediterranean to the colder north. It will only remain to inquire what type of culture was advocated not by Christ alone but by all the founders of the world religions; and it will then appear whether civilizations of that type were such as to leave behind them any material relics by which they could now be recognized.

5.

How far then does modern civilization accord with the religion on which it is based? The answer is a matter of platitudes and truisms. However worthy the private lives of individual

Englishmen, Frenchmen, or Americans, in no respect does the public life of their countries shew more than verbal deference to the doctrine of the Gospels. Humility, self-sacrifice, submission to violence or injustice, forgiveness of wrongs, love of enemies, preference of poverty to wealth—to mention these virtues in connexion with any European government is as grotesque as to speak of aeroplanes, gramophones, or torpedoes in connexion with Christ and His disciples. During the Great War the discrepancy between practice and ideals became so flagrant that many good people were hard put to it to reconcile their just indignation against German aggression with the counsel which bade them turn the other cheek to the smiter. But reconciliation was impossible, for their civilization pointed in one direction and their religion in another. By no ingenuity could the maxim *Thou shalt not kill* be twisted into a defence of war even in a righteous cause; no dexterity could turn the commandment *Thou shalt not bear false witness against thy neighbour* into justification of the calumnies spread abroad under the name of propaganda; nothing could transmute the Golden Rule into the Hymn of Hate. But it is needless to pursue the commonplaces. Civilization as now understood among the advanced nations has ceased to bear any relation to its parent religion, and the world looks forward in fear and trembling to its destruction.

THE HIGHER TYPE.

The type of culture advocated by the great religious leaders has no resemblance whatever to that which Europe has developed. Their ideal of life may be summed up in the words poverty, chastity, humility, and self-denial, but a nation that ordered its policy accordingly would find no place in modern civilization. There can be no question as to which is the nobler type. The

Christ who had not where to lay His head, the Buddha who forsook the palace for the forest, not only stand immeasurably higher than Lucullus feasting in his villa or the profiteer lounging in his motor car, but belong to a different *kind* of civilization. Given an environment in which the needs of daily life could be satisfied with little expenditure of labour, culture of the loftiest order might be attained by a community ignorant of all material arts and appliances. Men might maintain themselves in such a *milieu* with nothing better to serve their physical wants than leaves and coconut shells, subsisting on fruit, clad in bark, and sheltered beneath trees, yet—were certain indispensable conditions present—wise beyond the deepest wisdom of the Royal Society. Judged by any worthy standard, such men would have better right to call themselves civilized than any extant people, nor can we doubt that Christ and Buddha, Plato, Socrates, and Marcus Aurelius, Francis of Assisi and Father Damien, would find themselves far more at home in their society than in modern London or Paris. But such a civilization would leave no material relics behind it, and it would be vain to search its country of domicile for scrapers, celts, and arrow-heads. As for the art of writing, not only would the necessary records be few, but the example of Eastern nations proves that the trained memory can dispense with mechanical aid. Nor is the picture altogether fanciful, for we know that the ancient world, which held the art of writing in contempt for many thousand years after it had been invented, was constantly throwing up societies of this very kind; and even in modern times those in whom religion has real driving force continually strive to shape their lives in conformity with this ideal.

6.

Anthropology has based its theory of human antiquities on the crude stone implements scattered

all up and down the earth in old geological formations or in association with the remains of extinct animals. It is assumed that the cultural status of any age is determinable by its surviving artefacts, and even the wonderful paintings executed by palæolithic man have failed to throw doubt on this criterion. It is perforce acknowledged that other far more valuable bequests have descended to us from the remote past, but as it has never entered the scientific brain that these too must have been the work of the purposive human mind, they are thrown on one side as the products of chance evolution and receive no further thought. We propose to deal with the facts in less cavalier fashion.

Religion, says Reinach, is the life of human society at its very inception. If so, it is as old as man, for man has always been socially inclined. Further, as the anthropoid ancestor was certainly a social animal before he rose into manhood, he must have been potentially religious. If so, the ancestor of the great apes was potentially religious. Therefore the great apes are potentially religious, unless of course they have degenerated from their primeval parents. But if they have so degenerated, the common ancestor was a being who stood at a super-simian level, that is to say, he was a man and not an ape. Unless therefore science can detect the germs of religious feeling in the gorilla and the chimpanzee, she must revise her anthropology and look for the common ancestor in humanity instead of apedom.

RELIGION AND AUTHORITY.

Nothing being known as to the origin of man, nothing can be known as to the origin of religion. Nevertheless, the subject has been involved in needless obscurity by the superficiality of modern speculation. Religion and science are vividly contrasted in every vital feature, among others in their respective attitudes towards authority. To

science, basing herself on evidence accessible to all men, authority is anathema, but to religion; which purports to reveal truths concealed from all but a few rare minds, it is the very breath of life. So much is generally admitted, but as soon as Comparative Religion takes up the tale, this primary distinction is overlooked and it is forgotten that no religion has ever won acceptance save in virtue of its authority. Take that all-important ingredient away and nothing is left; the creed collapses like a pricked balloon. Creeds and moral codes are inventions in just the same sense as any other body of thought, and to suppose after the careless manner of some inquirers that they or any of them can have been the spontaneous product of savagery in the mass is to misconceive the very nature of religion. It is above all things a personal matter and rests on personal authority. With rare exceptions every man who holds a religious belief has acquired it from some other person, living or dead, of whose authority he feels assured; with no exception at all, the history of a religion, wherever it is known, leads always back to individual authority.

Reason requires us to predicate a similar origin of the religions whose history is unknown. The founder is indispensable to every creed. When therefore Sir J. G. Frazer writes that the great religious movements that have stirred humanity to its depths spring ultimately from the conscious and deliberate efforts of extraordinary minds and not from the blind unconscious co-operation of the multitude,¹ he is stating no more than the truth, except in so far as his last words imply the customary false assumption. What religious movement, great or small, has ever been known to spring from the blind unconscious co-operation of the multitude? History records not

¹ *Adonis, Attis and Osiris*, 260n.

one example, experience can suggest none. That all religions of which any trace survives must once have stirred the humanity concerned to its depths is proved by the survival, and the less favourable the conditions in which the trace has been preserved, the more irresistible the inference. As Reinach justly observes: "On ne peut guère concevoir l'essor d'une religion sans l'ascendant d'une volonté puissante, d'un génie comme Moïse, saint Paul, Mahomet." Even Jevons, though he sets out by arguing from religions without a founder, is forced to admit that in prehistoric no less than historic times progress in religion was always the fruit of religious genius.² A faith however humble connotes a founder as surely as a picture or a poem connotes an artist or a poet; and why should we suppose that the inspiration that taught the Arunta to believe in Daramulun, the Bushman in Cagn, or the Chono in Yerri Yupon was any whit less authoritative than that which revealed Jehovah to the Jew or God the Father to the Christian? *All* religions have sprung from extraordinary minds, and the logic which finds proof to the contrary in the fact that sometimes no memory of the founder has survived would equally persuade us that the Assyrian bas-reliefs are natural rock formations because we do not know the names of their sculptors.

7.

That every creed has had its founder is a truth more certain than any other in the whole range of sociology. In the case of the civilized peoples it is guaranteed by history, tradition, and experience, and among the backward races by the yet more convincing testimony of their beliefs. In dealing with the myths of savagery, ethnology has achieved a veritable masterpiece of inductive

¹ *Orpheus*, 280.

² *Introduction to the History of Religion*, 94, 396.

reasoning. Stupid, bestial, absorbed in the satisfaction of his carnal appetites, the lower savage nevertheless amazes us, writes Lang, by the wealth of his abstract ideas.¹ He can hardly count his own five fingers, but he meditates on the nature of the soul and dreams of emanation, evolution, and reincarnation. His mentality is that of the ape, but his beliefs abound in conceptions of the divine Mediator, the world soul, the creative Word, the second death. It seems incredible that men of science should occupy themselves with these facts and yet remain unconscious of the clamant contrariety between theory and evidence; as who should say, 'This animal has four limbs, a skull, and a backbone; it is evidently a mollusc!' But the opinion which held that civilization began five thousand years ago required that the savage should be near descendant of the ape, so that the notion—rather indeed the self-evident fact—that he had learnt his beliefs from other wiser teachers could never suggest itself to the scientific brain. On this blind abnegation of common sense Comparative Religion has built its confident speculations, and when therefore it discourses of primitive science and homeopathic magic and asks us to derive the mystic's consciousness of union with the Divine from the dreams of savage drunkenness, we can but answer that it is incapable of reason.

SETTING BACK THE DATES.

How many thousand years have rolled away since authority set its enduring seal on the savage imagination and taught the humbler peoples to believe in an Almighty Creator and the survival of the soul? Could it be known, the answer would stagger scientific humanity. There is more to be learnt from the myths than from all the fossils in the British Museum, but their secrets can never be penetrated until modernity has

¹ *Myth, Ritual, and Religion*, i. 94.

shaken off its literalism. Secrecy was the cardinal rule of ancient doctrine, fable and allegory its accepted modes of expression. Only in rare cases did the seer use plain language—without a parable spake he not unto the multitude. But it happens that one of the exceptions has been preserved in the figures relating to human antiquity, quoted from the Mahabharata at an earlier page.¹ Vyasa, we have seen, knew that man came on earth during the Eocene Age three or four million years ago, and his estimates of that and the succeeding epochs are in close correspondence with those of modern anthropology. How came the Hindu poet to anticipate our latest scientific conclusions in so recondite a matter, and whence can he have derived his knowledge if not from the ante-prehistoric civilization of the Eocene? Now in considering these figures the reader may be reminded that the story of geology and anthropology during the past century has been a continual setting back of the dates. The age of the earth, originally estimated at about 10,000,000 years, first went back to 80,000,000 and then to “some small multiple of 1,000,000,000.”² The probable period during which there has been life on this globe has undergone a similar expansion, and is now said to be about 1,000,000,000 years. The age of man has risen from 25,000 years (the estimate can still be found in the latest *Encyclopædia Britannica*) to 250,000, 500,000, and 2,000,000 years, Professor Arthur Thomson believing it possible that man of the modern type was distinguishable 1,000,000 years ago.³ It took thirty years to reconcile the anthropologist to pre-neolithic man, and the idea of Miocene humanity is now matter of similar controversy. But once we have parted company with Archbishop

¹ *Supra* p. 19.

² Rayleigh, *Times*, 14/9/21.

³ *System of Animate Nature*, 550.

Usher, writes Professor Thomson, there is no use in haggling over a million years more or less;¹ for indeed, so complex an evolution as that of man should be more and not less intelligible if it be spread over several million years instead of a few tens of thousands. Archbishop Usher is not yet exorcised, but the ancient estimates are ceasing to seem extravagant. The trend of scientific thought suggests that they will be conceded by anthropology before the end of the present century.

8.

Authority, we have said, is vital to religion, and it follows that no creed has ever won a disciple save through the authority of some extraordinary mind. Incontrovertible in itself, the truth is proved to demonstration by the beliefs surviving among the lowest savages, whose brutish wits could no more have conceived the ideas embodied in them than a monkey could have written the Moonlight Sonata. That which is true of religion is *a fortiori* true of her inseparable handmaid morality. All hope of accounting for this peculiarly human attribute has vanished from science with the Darwinian doctrine, but even if transmissibility of acquired characters were a fact, it would still be insufficient to explain the intuitive perception of moral laws—not of senseless tabus—which has always distinguished the religious genius. The idea of moral obligation is innate, but the teacher's precepts come to all men stamped with the hallmark of authority, and in savagery as in civilization they are and always have been matter of instruction.

THE MORAL LAW.

But morality being inexplicable on hominid assumptions, it has lately become the fashion to pretend that there is nothing to explain.

¹ *Ibid*, 547.

Is morality visible in the lower world, it is asked? Do we not know that moral standards have varied at different times and among different peoples, and even to-day are not one man's notions of right or wrong inconsistent with his neighbour's? Surely then the so-called moral law is a mere matter of convention and needs no more accounting for than any other superstition! It is hard to deal patiently with this shallow reasoning. No doubt the moral sense is imperfect; no doubt the ordering of mundane affairs may often seem iniquitous, and it is the fact that sometimes one virtue and sometimes another has been singled out for special admiration. But what should we infer from this? A generation that has abjured the atomic theory should need no caution against induction from surface appearances, while as for the variation in moral standards, those who argue from this fact conveniently forget that whatever the quality chosen from time to time for special reverence, it has always been a *virtue*. Man has never been taught to admire impurity, cowardice, treachery, self-indulgence. Throughout all history truth has been truth, justice has been justice, courage has been courage, mercy has been mercy,¹ and if at times one quality has been honoured and another disregarded, what has that to do with the case? The values have never been reversed—or if they have been, the race that worshipped evil instead of good has perished from off the earth. Pressed to its logical conclusion, the argument asks to believe that social order is compatible with a state of perpetual licence. The experiment has been tried in Easter Island, with results commended to those who regard the moral law as devoid of external sanction.

THE DIVINE RULERS.

Now every ancient people held to the belief that its culture was no random growth but the gift

¹ Acton, *Lectures on Modern History*, 27.

of some great hero or law-giver. The belief was founded in fact. Civilization, whatever its rank, is the daughter of religion, and as all religions must be traced back to individual genius, so too must all civilizations. The law-giver—ordainer of the *nomos* or rule of conduct—was he who instilled the moral law into the minds of his hearers, and he was accordingly revered as founder of the society. He may not have been actual inventor of the arts and sciences that presently sprang up among his disciples, but they were the fruit of the creative impulse he imparted, and he was rightly deemed author of the culture. The idea is really pure commonplace, for universal experience shows that it has always been the one who leads and the many who follow, nor has any notable advance in any branch of human thought or activity ever been accomplished save by the exceptional mind. The culture hero is therefore a necessary inference from the facts, and the science which assumes the spontaneous mass-evolution of religious beliefs—but forgets to explain why any man should have believed the beliefs—must give place to the exploded superstition. It is design, not accident, that has raised humanity to its present level, purposive effort, not chance evolution, that has founded our civilizations and paved the way to our conquests over Nature. In ancient parlance the men whose genius discerned the laws of our being and whose personality imposed obedience and reverence on their fellows were called divine. Posterity worshipped them as sons of God, nor is it for the Christian to whom even common men are children of the Almighty Father to deny the title to those great leaders of our race.

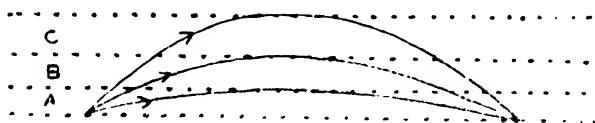
Creations of the long-forgotten past, man is indebted to religion and morality for the essential factors of science, art, civilization, society itself. When that has been said all has been said, for the founders of the religions were the authors of

all our culture, and the lesser products of human skill are but twigs and leaves that have sprung from the parent trunk. What then could be more absurd than to judge of the prehistoric world by its trivial material remains? Would Europe be content that her achievements in science and mathematics should be cast on one side and her civilization assessed by its output in gingerbeer bottles? It is needless to dwell on the lesser works of the genius that gave humanity its incomparable heritage. Conspicuous among them is organized speech, a gift popularly classed with morality and religion as the product of automatic evolution, but bearing upon it the unmistakable marks of purposive invention, and rightly ascribed by the elder peoples to their divine rulers. They it was who taught the lower races their tabus and intricate tribal rules—harsh discipline of custom without which the savage would have perished incontinently of his own lawlessness; they it was who inculcated the germs of religion alike in degraded Bushman, stubborn Jew, and facile Greek; they it was who composed the myths and instituted the Mysteries to which not all our industrious scholarship can find the clue; they it is to whom Europe owes her art, literature, science, and civilization. But the world knows nothing of its greatest men, and save in two or three instances the very names of these great benefactors have been forgotten.

RACIAL TRAJECTORIES.

Ethnology has been deceived by an unphilosophical trust in the obvious. The first link in the sequence apedom-savagery-barbarism-civilization has never been forged. The second and third terms refuse to hold together because no savage shows any tendency to civilize himself, nor has any case been known in which the savage

has advanced in culture without exterior help. But this is not to say that the ancestors of civilized peoples may not have passed through a state resembling that of savagery. They have certainly done so, but their savagery was differentiated from that of the Papuan or Kikuyu by the fact that they did not remain in it—a fact of which science has forgotten to take account. It proves that the condition from which our forefathers emerged at a certain period of their history is not to be judged by that of any extant savage. The nascent culture of the one was as different from the adult culture of the other as dynamic from static; just as the English child may grow into a Newton or a Browning, whereas the Negrito child can never do so. The career of every race, as of the individuals who compose it, follows the trajectory prescribed by its capacities. A simple diagram will explain our meaning :—



The spaces between the dotted lines represent the lower culture (A), the middle culture (B), and the higher culture (C), and the curves are the trajectories of savage, barbarian, and civilized societies. All start from and return to the zero points of birth and extinction, and near the beginning and the ending they may seem indistinguishable. But the savage can never rise above the lower culture nor the barbarian above the middle, whereas civilizable man passes quickly through these stages to his own proper level. Extant savagery then, though in some cases the descen-

dant, is not the ancestor of any civilized people, nor its culture the parent of any civilization.¹

9.

The tendencies of modern civilization have been so far defined by the experience of the past eleven years that a kind of stock-taking has now become possible, and it may be worth while to institute a brief comparison between the ancient and the modern worlds in respect of their distinctive contributions to human knowledge. In this age of higher mathematics, spectroscopic analysis, bacteriology, wireless telegraphy, flying machines, and trinitrotoluol, little need be said in praise of the modern contribution. In these and the other multitudinous descendants of the printing-press mankind is thought to have attained an order of knowledge altogether superior to that of antiquity, so much so that the very schoolboy to-day has a more adequate grasp of Nature and her mysteries than the wisest of the ancients. It is a comfortable belief, but does not excuse the universal failure to appreciate the ancient contribution. No doubt, it is admitted that all the greater inventions and discoveries—agriculture, fire-use, language, the domestication of animals, and the development of the food-grains—have descended to us from the past, but these are ascribed to accidental or automatic evolution; while as for the curiously advanced philosophy of the early Greek thinkers, implying as Jowett said almost a maturity of natural knowledge, their speculations are all set down to mere unverified guesswork. Now it may be that in mathematics and mechanics the present has outdistanced the past. But these accomplishments afford no very lofty standard of comparison, and

¹ A similar but far more complex diagram might be applied to the individuals who make up the society. The idea will commend itself to those who play games of skill (especially golf and chess), and are conscious that no amount of practice will ever take them out of their natural class. Each has his own highest level of proficiency and cannot surpass it.

history shews indeed that science of this order cannot be indispensable to progress. For the great empires of Egypt, Mesopotamia, and other ancient countries—organizations which endured for more centuries than our own can yet count decades—prove that so-called exact science is by no means necessary to civilization even of an advanced order. The evolution of higher man, at any rate, owes nothing to proficiency in physics and mathematics.

ANCIENT AND MODERN.

The modern world is distinguished from the ancient by many striking differences, but in no respect is the contrast between them so profound as in the subjects wherewith their attention was or is most preoccupied. In the first place, if modernity is the age of science, it will be noticed that antiquity was equally the age of religion. It is an exclusively ancient product. Nothing worthy of the name has been invented since the time of Mahomed. During the two thousand years from B.C. 1400 to A.D. 600 eight new creeds were given to the world—Judaism and Christianity in Palestine, Orphism in Greece, Mithraism in Persia, Buddhism and Jainism in India, Confucianism in China, and Mahomedanism in Arabia. But the subsequent thirteen hundred years have witnessed no addition to the list. Moreover, there seems to be a constitutional antipathy between modernity and antiquity in this respect, for so far from adding anything to our inheritance, science continually cheapens and impoverishes it, and only a few years ago proclaimed that it had altogether destroyed the worthless bequest. Now six of the religions just named, as well as others far more ancient, survive as active forces to the present hour, and in point of influence and practical effect, each and all of them so far transcend the whole body of modern scientific discoveries that no comparison between the two

can be suggested. The pragmatist would infer that religion is a matter of indefinitely greater importance to humanity than science. And indeed, the creeds which have inspired man to self-sacrifice, purity, and love of all that is noble have done incomparably more towards raising him in the scale of being than the sterile utilitarianism which is all that science can offer in their stead.

FALSE VALUES.

Without fear of contradiction therefore, it may be affirmed that in devoting its chief attention to religion, a sphere in which modernity destroys much but can create nothing, antiquity displayed the greater discernment. The ancients dealt with the mainspring of our evolution, the moderns spend their energies on test-tubes, microscopes, and the square root of minus 1; but even to-day most will probably agree that we could better dispense with the theory of quadratic equations and Newton's laws of motion than with the maxims of the Sermon on the Mount. In fact, this inability to discriminate between trivial and vital, casual and essential, was the great weakness of nineteenth century philosophy, nor can we better illustrate the point than by a question from a typical Victorian writer. "We have weighed and measured the stars," boasts Mr. E. Clodd,

"we have captured their light in our prisms and extracted therefrom the secret of their structure; we have computed how many years elapse before the light emitted from the nearest stars reaches our system; we have displaced the earth from its old position in primitive thought as the centre of the universe; we have dethroned the sun as an orb of the first magnitude, and made some approach to knowledge of the distribution in space of his millions of fellow suns. Our telescopes have swept the skies and found no ascending or descending angels there"—

and then the pæan sinks to the pitiful anticlimax,
 "but we have given to the feeling of wonder
 legitimate and larger play!"¹

¹ *Animism*, 48. Awe, "the fear of the Lord," is only the beginning of wisdom.

And that is all! We have begun to entertain a respect for Thaumas, and after a few more thousand years of this magnificent advance, we may perhaps reascend to Hesiod's level and learn that he is father of Iris! The fact of course is that the whole scientific structure rests on a false sense of values. For even the rationalist will not hesitate to acknowledge that inasmuch as thought plays an insignificant part in human affairs as compared with feeling, it is the emotional side of the psyche that really needs cultivation, not the intellectual, and the truth will hold so long as man finds love more attractive than compound addition and pays more attention to a tooth-ache than to the most scientific text-book ever written.

10.

It must appear then that the age which gave us the moral codes and religious ideals made a contribution to human welfare beside which the concentrated wisdom of all the scientific thinkers from Galileo down to Einstein is a thing of no account. But it must be clearly realized that in large measure these were contributions to knowledge as well as to welfare—indeed, to its most important branch, namely, the science of human evolution. After all, it matters relatively little what happened to man in the past. His urgent business is how to conduct himself in the present and prepare himself for the future, and whatever advice science can give him on the point is copied from the ancient prescriptions. When therefore the reader takes up a once famous book called *The Conflict between Science and Religion*, the title may remind him of the struggle sometimes seen between a precocious little boy and his wise parent. The little boy alternately delights and terrifies the maid-servants with his conjuring tricks and chemical experiments, and like all children is fully per-

suaded that he knows better than his elders. But in these last few years he has come perilously near setting the house on fire, and is already fleeing to his mother's skirts for protection against the consequences of his folly. A century or two of analytical methods and scientific progress have brought our splendid civilization, the admiration of all its authors, to the verge of ruin, and have inflicted on humanity a mass of agony such as it had never before endured. And to what do men now appeal to save them from the yet worse cataclysms threatened by the onward march of scientific destruction, if not to the indispensable precepts of religion? The nations live in terror of a new war, when their sons shall be armed with the ever deadlier weapons that science is busily perfecting, and if it come, science itself must go down in the catastrophe, a blinded Samson buried beneath the ruins of the temple he has wrecked. Surely then this modern cult is no worship of the true God, but rather of that cruel deity in whose honour the people drive their children through the fire?

THE AGE OF DEATH.

Even a cursory comparison between the ancient and the modern contributions to human knowledge will make clear the real distinction between them. Life is the God of all religions, and from the past we have accordingly inherited all the arts of life--agriculture, fire-use, animal domestication, the food-grains, even the principles of hygiene, if recent medical authority may be trusted,¹ but above all, the ideals of religion and the rules of morality. To the present, what do we owe but the sciences of death? For every man inspired to selfless devotion by love of truth, how many hundred thousands are corrupted by the continual elaboration of luxuries and aids to vice?

¹ Dr. L. W. Sambon, *Times*, 28/1/20; Sir J. Cantlie, *Daily Telegraph*, 14 2/20.

For every life saved by our skilful surgery, how many millions are sacrificed to the squalor and misery of our great cities? For the number who are benefited (as it is said) by some labour-saving invention, what incalculable crowds are reduced to starvation and despair? And for the greedy profiteers who battered on the manufacture of high explosives and machine-guns, what countless corpses rot beneath the battlefields of France and Belgium! Ancient wisdom and modern science—*By their fruits ye shall know them*, said the Teacher, and history has furnished materials for the comparison. On the one hand, the Hill of Calvary, where one man died for the people; on the other, the heights of bloody Passchendaele, where the many suffered for the few!

II.

The high antiquity we have ascribed to civilization will excite surprise and even ridicule in a generation brought up to believe that until a few thousand years ago the earth knew nothing better than a welter of savagery. A survival of medieval ignorance, the belief pertains to the days when men supposed that the earth was flat and writing a Phœnician invention. Culture is commensurate with faculty and civilization with civilizable man. Unless then it can be denied that the mental powers of a race may be estimated by the shape and capacity of their skulls, faculty of the highest order, together with a corresponding culture, must be predicated of the palæolithic peoples. The Cro-Magnons who entered Europe from some unknown region 25,000 years ago, and who must have had behind them an evolutionary history of incalculable duration, are described by Sir Arthur Keith as one of the finest races, mentally and physically, the world has ever seen;¹ and it happens that this race has left us evidence of its talent

¹ *Ancient Types of Man*, 71.

in remains which by themselves are enough to prove its high endowment. That such a people could persist in a state of savagery for even two or three centuries is not to be imagined, and the fact that their implements (or such of them as have been preserved) may have been what we now call primitive raises no presumption against their civilization,¹ though it may suggest that that civilization was of a different order from our own. For the science which appraises a culture by the material relics spared to us by ages of destruction is misled by a false criterion—a criterion which, applied to its own case, after a similar lapse of time, might determine its level by a few worn scraps of glass and earthenware and take no account of its worthier accomplishment. The true test must be sought in the mental sphere, not in the physical, and we must consent to judge the prehistoric peoples as we hope that posterity may hereafter judge ourselves: not by perishable artefacts, but by the nobler and more enduring creations of the mind.

In fine, we plead for a truer recognition of human dignity, a less barbaric, less parochial conception of human evolution. *Vixerunt fortes ante Agamemnona*. The divine rulers who instructed their pupils in the ideals of religion and the laws of morality, and taught them to use articulate speech, to tame the fire-fiend, and to till the ground, were inspired by a far loftier genius than the disciples of a science which has brought their civilization to the brink of ruin. Man's destinies depend on his thoughts and feelings, and it is to them who taught him to think and feel aright that he owes his pre-eminence in Nature. The fact should chasten our self-complacency and restore our reverence for the past.

¹ The less if, as there is reason to believe, the Cro-Magnons were the surviving refugees from a cataclysm which had wrecked their homes. See *Lost Atlantis* below.

SCIENCE AND THE PAST.

1.

Addressing the Radio Society of Great Britain a few months ago, Sir Oliver Lodge propounded a new theory of sight.¹ "What is it," he asked, "that stimulates the nerves of the eye? I believe it is the electrons thrown off by the atoms. What the nerves feel is the shock of the ejected electrons." The theory is older than the Parthenon. In the fifth century before Christ, at a time when it is commonly supposed that science was in its cradle, Empedocles taught that "vision receives effluences. These arise on the surface of the mirror, and they are completed by means of the fiery matter separated from the mirror;"² that is to say, by the electrons. The fiery matter, of course, is the æther, a conception for which the world is indebted to the pre-scientific Greeks. Our dictionaries still pretend that æther in Greek merely means the upper air, but since it was described even in the early sixth century as the basic substance from which matter in its four known modes is derived, this is inane. "Titan æther," wrote Empedocles, "binding all things in its embrace, sinks through earth with its long roots."³ How can this be the upper air?

LUCKY GUESSES.

Modernity is saturated with the conviction that although the Greeks may have made a few

¹ January, 1925.

² A Fairbanks, *First Philosophers of Greece*, 227. This is the most convenient book of reference for the ordinary reader, and gives the less accessible Greek originals. Mr. Fairbanks' translations, however, are often inaccurate, and he is especially fond of substituting air where the Greek has æther.

³ *Ibid.*, 172, 178.

lucky guesses, nothing really worth knowing was known to them. Not till the ignorance of a million years was dispelled by the brilliant intellects of Galileo, Newton, Lyell, Davy, Kelvin, Darwin, Rutherford, Einstein, and the other great pioneers of scientific discovery was anything really understood as to the nature of the Universe. It is a comfortable belief but unfortunately incompatible with the facts. Except in mathematics,¹ it is difficult to name a branch of knowledge in which the early Greeks did not anticipate our latest and most applauded discoveries. But before proceeding to demonstrate the fact a word may be said about the lucky-guess theory. A guess presupposes an unsatisfied curiosity. The mind that conceives it must feel that the current explanation of a phenomenon is not the true one; otherwise it has no reason for seeking a better. Now it is common knowledge that the heliocentric theory descended to Copernicus from the Pythagoreans. But every man, woman, and child can see that the Sun goes round the earth; for what imaginable reason then did these primitive thinkers refuse to accept the evidence of their senses? Or again: Anaximenes knew not only that "the stars are made of earth and do not give out heat because they are too far away," but that "there are bodies of an earthy nature in the place occupied by the stars and carried along with them in their motion."² The guess has been verified by our refined astronomy, but why should Anaximenes have made it? And again: the Pythagoreans were acquainted with the law of periodicity, while according to Jowett the nebular hypothesis was the received belief of the early physicists.³ Were these ideas the fruit of idle conjecture? Why should ignorant barbarians have guessed at the heliocentric theory, the luminiferous æther, and the existence of dark

¹ *Ibid.*, 20.

² *Dialogues of Plato*, iii. 416.

stars, and how comes it that the guesses exactly hit the mark ?¹

ANCIENT RETICENCE.

No doubt, these and other instances of profound knowledge are mingled with a great deal of childish superstition. Thales declared that the sky moved about the earth like a cap on a man's head; Anaximander compared the stars to the stops in a flute, and so forth. But Thales also foretold a solar eclipse, while Anaximander, who knew among other things that the Sun is far larger than the earth, was the first to state the nebular hypothesis. How was it that the absurdities co-existed in the same brains that conceived the profundities? The question is not even asked, much less answered. But every schoolboy knows that the ancients safeguarded their knowledge by attaching the most stringent penalties to its disclosure. Anaxagoras was sentenced to death for betraying astronomical truths; Hipparchus was drowned and Hippasus banished for divulging the secrets of geometry, and evidence of the once universal reticence survives even in the New Testament. All this is unintelligible to the modern world, which nevertheless pretends to understand antiquity better than the ancients themselves. In any case, the lucky-guess explanation is untenable, the more so because it happens that the Greeks have recorded the two great principles that governed their inquiries. *Nature loves to hide*, they said; *the senses are bad witnesses*. This is science, not ignorance. Had these admirable maxims been instilled into the Darwins, Huxleys, Haeckels, and other great thinkers of the nineteenth century, the world might have been spared the disastrous consequences of their simplicity.

¹ The suggestion sometimes made that ancient guessing exhausted all imaginable theories fails to explain why the right guesses should have been retained out of so enormous a number.

It is not impossible to explain the reasons for the reticence, but the task cannot be undertaken here. Our present purpose is to show that the latest scientific discoveries of Europe were known to pre-scientific Greece, whose philosophers dwelt in a blaze of enlightenment compared with which the state of knowledge in Jowett's day was black ignorance. The evidence to be reviewed is so profuse that it is not easy to compress it within reasonable limits. For clearness' sake it will be considered under the headings astronomy, transcendental physics, geology, meteorology, and physiology, but it must be borne in mind that in most or many of the cases the evidence is not that of the philosophers themselves but of their knowledge as reported by the nescience of a thousand years later. Allowance must therefore be made for error and mis-statement on the part of men who could hardly understand the terms used by their predecessors, and had no comprehension whatever of their conceptions.

2.

1.—*Astronomy.* A world familiar with the heliocentric theory and the nebular hypothesis can hardly be accused of ignorance. Thales (B.C. 600) knew that the stars "are made of earth but are on fire;"¹ Anaximenes (B.C. 500), that they are too far away to give out heat, and that some of them have non-luminous companions. The cause of eclipses was known not only to them but to their Babylonian tutors,² who were also aware that Jupiter has four satellites. Thales, as we have said, foretold a solar eclipse, a feat not to be accomplished by any rule-of-thumb prescription. It is an *old* doctrine, says Socrates, that the moon gets her light from the sun.³ In Anaximenes' conception (B. C. 580) the world swings suspended

¹ Fairbanks. 7.

² J. E. Gore, *Astronomical Essays*, 29.

³ *Cratyl.* 409b, Thales knew it.

in space, one of the many bubbles floating in the boundless aether.¹ He taught further that "infinite worlds exist in the infinite in every cycle," a doctrine with which we may compare a sentence in a recent number of *Science Progress*:—"This much we know, that our whole system is probably part of an unknown, undetermined cycle."²

AN UNSOLVED PARADOX.

Now in reference to this matter of early Greek astronomy, no attempt has yet been made to resolve an extraordinary paradox. Our own astronomical knowledge is entirely dependent on mathematics, and according to current belief, mathematics were the invention or discovery of Thales. How then did his contemporaries contrive to penetrate the mysteries of the stellar universe? Further, although mathematics progressed by leaps and bounds from the sixth century onwards, the science of the heavens, so far from gaining in accuracy, went persistently backwards. The Pythagoreans taught the heliocentric theory, but after some four hundred years of steady mathematical advance, the idle superstition was refuted and a truth patent even to the savage reaffirmed! The process continued by regular degrees, until all real knowledge of astronomy was extinguished and men believed that the stars were so many pin-holes in the floor of heaven. How is this progression backwards to be reconciled with our conceptions of history and why do our learned men conspire to ignore it? The process was not peculiar to astronomy. In every branch of thought as also of art a continual retrogression is manifest from the early Greeks down to the miserable fancies of the Byzantines, and only lately has civilization begun to reascend to their pre-scientific level. What is the explanation? None has

¹ Fairbanks, 19, 20, 22.

² Oct. 1920.

hitherto been attempted except the ridiculous lucky-guess theory, together with a kind of wilful pretending that the ancients were crass barbarians—whereas in truth they were our masters. This will now be proved to demonstration.

THE FIRST PRINCIPLE.

2.—*Transcendental Physics.* In approaching this branch of knowledge, we are met at the outset by a startling contrast between the basic conception of the early Greeks and that of the nineteenth-century philosophers. Until recent discovery compelled science to recognize that the atoms formerly deemed immutable and eternal are really nodes or tension-points in a *milieu* of violent activity, it was supposed that immobility was the natural state of all things, and that the Universe, wound up at some unimaginable beginning like a seven-day clock, was steadily running down into a condition of permanent rest. Pictures were drawn of the coming epoch when the light of day should have been extinguished, when life should have disappeared from this earth, and when the planets should at last be falling in upon their parent Sun into an eternity of dead nothingness. The conception still finds favour with Mr. Bertrand Russell,¹ but the discovery of the electron has dissipated this mournful outlook, at any rate for men of science. The physicist now finds himself obliged to conceive of mass itself, that most ineluctable property of matter, in terms of motion, and it is accordingly recognized that motion is the primary reality, not immobility. But to the pre-scientific Greeks this was the first word in science. Thales, and Heraclitus after him, taught that all things are in a state of flux. Anaximander held that the first principle is eternal motion, and that the heavens are produced thereby. Anaximenes also regarded

¹ *Mysticism and Logic*, 48.

motion as eternal, and his successors down to Plato were brought up in the doctrine.¹ In this fundamental matter, therefore, the early Greeks were conspicuously right and the scientists of Spencer's day as conspicuously wrong.

MATTER AND EVOLUTION.

Naturally then the Greeks regarded matter as the product of evolution. Anaximander said that the first principle was to be sought not in the four elements but in some fifth substance underlying them.² The conception meets us again among the Pythagoreans, who held that there were five elements, "for they ranked the æther as a fifth along with the four,"³ and among later philosophers the fifth element became known as the familiar quintessence. Empedocles, who called æther Zeus and air Hera, placed æther first in order of evolution, fire, earth, and air succeeding it.⁴ Now Dr. J. Burnet tells us that the ancients were well aware that earth, air, fire, and water were not elements in our sense of the term, but modes of matter—solid, gaseous, radiant, and liquid.⁵ Can we then avoid the inference that when Thales and the rest sometimes spoke of the first principle as air or water or fire, they meant something quite other than the air we breathe, the water we drink, or the fire we cook our food with? They were using these names to signify the æther—that which modern science cannot conceive save as the eternal motion regarded by the Greek philosophers as the source of all things.

Finally, Plato describes the æther as "the mother and reservoir of visible creation—an in-

¹ Fairbanks, 4, 13, 14, 19, 21. Like Sir Oliver Lodge, Anaximander taught that the æther "does not grow old."

² *Ibid.* 12.

³ *Ibid.* 149.

⁴ *Ibid.* 224.

⁵ *Greek Philosophy*, i. 27.

visible and formless *eidos*, most difficult of comprehension and partaking somehow of the nature of mind."¹ What is the present opinion? According to Mr. Julian Huxley, "there is only one fundamental substance, which possesses not only material properties, but also properties for which the word *mental* is the nearest approach."² Something partaking of the nature of mind, in fact! What a lot of time and error our men of science would save themselves if they would only throw away their textbooks and study Plato!

3.

2.—*Transcendental Physics (continued)*. In the ninth edition of the *Encyclopædia Britannica* (1875) the curious will come upon the statement that the Phœnicians thought they could observe in the atom "what we may call the osculation of the play of forces; this at least seems the most natural explanation of the term *nodes* by which they designated atoms."³ The writer proceeds to call it a singular fancy, as indeed it certainly appeared to his omniscience. Later inquirers will term it a startling anticipation of our very newest discoveries. Now the Greeks, as we have seen, were aware that the æther is the substance of which matter is made, and it is a safe assumption that they acquired the knowledge from the Oriental masters who taught them the alphabet and the art of writing. We may take it then that Anaxagoras (about 450 B.C.) was reproducing Phœnician science when he penned the following remarkable lines:—

"These things rotate and are separated by
force and swiftness. And the swiftness produces

¹ *I*im. 51 a. The ancients again anticipated Sir Oliver Lodge by supposing that the æther is the substance of which the soul is made.

² *Science and Civilization*, 285.

³ i. 460.

force; and their swiftness is in no way like the swiftness of the things now existing among men, but it is certainly many times as swift."¹

The text now extant does not define what "these things" were, but no one can read the passage without recognizing that Anaxagoras was speaking of what we now call ions and electrons. Could there be any doubt on the subject, the "singular fancy" entertained by his Phœnician tutors must dispel it, and we must accordingly conclude that the Greek philosopher knew more about physics than Dalton, Berzelius, Faraday, or any of the great chemists of the nineteenth century. When therefore another ancient writer mentions two wonderful stones which take fire when water is poured on them,² it is reasonable to suppose that Davy's discovery of potassium and sodium was new only to modern ignorance. And finally, when Clement of Alexandria speaks of a material air, which is the "nourisher of sensible fire and the basis of combustible matter,"³ even Priestley's famous isolation of oxygen dwindles into an unconscious plagiarism.

LIGHT.

A few words may be added as to the conception of æther as the vehicle of light. The matter is beyond dispute. Homer makes æther the home of Zeus, the Bright One; Empedocles terms it the all-luminous, and Plutarch says that some call it light. Even in the decadent era of Constantine, Julian describes the fifth element as that whose principle is light.⁴ Finally and conclusively, the word itself is formed from a root meaning to light up or kindle. All the ancient poets therefore associate æther with the heavenly bodies, and

¹ Fairbanks, 238.

² Pseudo-Aristotle, *De Mir. Ausc.* xli.

³ M. M. Pattison, *Story of Alchemy*, 129.

⁴ *On the Sovereign Sun* (King), 221. Iamblichus states that æther is not subject to gravity; *De Myst.* 5, 4.

Empedocles, as we have seen, describes it as universal and all-penetrative.

Mention may be made here of the law of periodicity as conceived by the Pythagoreans. They applied it, not to the chemical elements, but to the celestial universe, as will be apparent from the following quotation from Aristotle :—

“Whatever characteristics in numbers and harmonies they could shew were in agreement with the properties of the heavens and with its parts and whole arrangement, these they collected and adapted; and if there chanced to be any gap anywhere, they eagerly sought that the whole system might be connected with these (missing parts).”¹

Aristotle proceeds to give an illustration which shews that the principle applied was the same as that which led Mendeléef to assume the existence of gallium to fill a gap in his scheme of the elements. Whether it has yet been adopted into modern astronomy, we are not competent to say; but inasmuch as the atom is now described as a miniature solar system, there are *a priori* grounds in favour of the suggestion. But indeed, the ancient maxim *As above so below*, dressed up as the unity of Nature and the continuity of law, has long been making its way into modern science, and it will be no surprise to learn that the solar system is governed in every respect by the same laws as the molecule and the ion.

EVOLUTION.

No further evidence is needed to shew that evolution, that grand conception which we are popularly supposed to owe to Darwin's genius, was the very ABC of ancient philosophy. If matter itself was evolved—a notion which never entered Darwin's brain and would have been indignantly scouted by the physicists of his time—a *fortiori* all material substances and forms were produced by the same process, and every ancient philosopher

¹ Fairbanks, 137.

(incidentally also many modern savages) accepted the truth as axiomatic. Instantaneous creation *ex nihilo* never commended itself to any but European profundity. To place the matter quite beyond doubt, however, Anaxagoras' famous definition may be quoted :—

"The Greeks do not rightly use the terms 'coming into being' and 'perishing.' For nothing comes into being nor yet does anything perish, but there is mixture and separation of things that are. So they would do right in calling 'the coming into being' 'mixture,' and the perishing 'separation.'"¹

More than two thousand years later Herbert Spencer adopted the conception and adapted the definition ; without however acknowledging an inspiration of which he was probably unconscious.

4.

3. *Geology*.—At this point the evidence becomes less abundant, though there is still enough to convince us that the early Greeks were well informed as to the history of the earth and the causes of atmospheric phenomena. It has been shewn that they were familiar with recondite astronomical secrets, and that in transcendental physics their knowledge was well abreast of our own. Further discovery may prove that these pre-scientific barbarians were not only well abreast but well ahead of modern science, for as may be seen from the Victorian example, knowledge is always unintelligible to ignorance. Dalton could not know that Heraclitus' maxim *All things flow* was better science than the atomic theory. The encyclopaedist laughed at the Phœnician description of atoms as nodes of force and poured contempt upon the transmutation of metals ; Tyndall proclaimed the non-existence of the psyche in which with Plato a wiser generation is beginning to discern the mainspring of evolution.

¹ *Ibid.* 244. Anaximander anticipated the definition.

The mind must ascend to a certain height before truths invisible from the lower levels come within its ken, and the prudent inquirer will therefore be slow to reject as superstition that which may be knowledge to which he has not yet attained. Especially must this caution be observed when the theory or statement under examination, however incompatible with current opinion, emanates from a source of proved authority, and as the competence of the Greeks in astronomy and physics has now been established beyond all cavil, their views of kindred matters deserve the greatest respect. *Ex pede Herclem* is the only safe principle to follow in these inquiries.

NEBULAR HYPOTHESIS.

Nor must the ancient habit of reservation and ambiguity be forgotten. Silence is golden, says a familiar apophthegm, and even superficial reading will shew that Thales never meant potable water nor Heraclitus visible fire when they used these names for the first principle. When we come to the theory of Creation, scholarship is fain to admit that Plato was guilty of deliberate obscurity.¹ Little therefore is known regarding Greek ideas as to earthly origins, but an excellent account of the nebular hypothesis has come down to us from the early sixth century. Something productive of heat and cold, says Anaximander, was separated from the Eternal Being,

"and a sort of sphere of this flame surrounded the air about the earth as bark surrounds a tree. Then this sphere was broken into parts and defined into distinct circles, and thus arose the sun and the moon and stars."²

As it stands, the statement is geocentric, but ancient language must not be construed *au pied de la lettre*. Anaximander's contemporaries accepted

¹ Lewis Campbell, *Enc. Brit.* xxi. 823.

² Fairbanks, 14.

the heliocentric theory, but they reserved the doctrine for the inner circle of their disciples and would not communicate it to the many. The fate of Anaxagoras and Hipparchus shews us how dire a penalty attended the disclosure of the secrets to the vulgar. Information as to early Greek geology is therefore scanty, but we know that Thales and the Pythagoreans divided the earth into five zones—arctic, summer, equinoctial, winter, and antarctic, of which the last was said to be invisible.¹

LOST ATLANTIS.

Coming to Plato, we encounter another remarkable contrast between Greek truth and European error. The philosopher knew that in the course of ages the surface of the earth had undergone tremendous changes, and he has left on record a famous description of the great island continent that once stretched across the mid-Atlantic.² Here as elsewhere enlightenment sought to amend his knowledge, Wallace and others maintaining that the existing distribution of the land surface had endured practically unchanged ever since the moon was torn away from this our planet. Needless to say, the advance of knowledge has again justified the Greek. The old belief in cataclysmic changes—major readjustments, they are now called—has been restored, and geologists are of opinion that not only Atlantis but Lemuria, that vast belt of land that reached across the ocean from Peru to Madagascar, was once a solid fact.³ But why Plato should have called his lost continent by a non-Greek name whose first three letters compose the Aztec word for water is still a mystery.

It only remains to add that Plato's account of the causes which led to the denudation of the

¹ *Ibid.* 6, 149.

² *Infra*, p. 113.

³ *Infra*, p. 105.

country about Attica still commands the admiration of our men of science.

WINDS AND EARTHQUAKES

4. *Meteorology*.—This branch of our subject may be briefly dismissed. Anaximenes (sixth century), the chief ancient authority on the subject, is hardly known to us except through an ignorant writer of eight hundred years later; but even so, the genuine science is visible beneath the misunderstanding. Winds, Anaximenes is reported to have said, are produced "when the air that has been attenuated is set in motion"; earthquakes, "when the earth is changed yet more by heating and cooling"; and rainbows, "when the sun's rays fall on compressed air."¹ The character of these explanations—their freedom from anything approaching superstition—affords the highest testimony to the intellectual outlook of their author.

And what of Jupiter Elicius, that early Etruscan God whose votaries forestalled Benjamin Franklin and called down lightning from the skies? The fact is recorded by Pliny, Ovid, Varro, and Seneca, and may be found in any school dictionary, but no one pays it any attention. It remains embedded in popular history like the proverbial fly in amber, an unexplained marvel. Is it coincidence that an inscription at Edfu shews that the *oldest* known Egyptian obelisk was employed as a lightning conductor?² Or should we not rather conclude that these are relics of a knowledge that equalled or surpassed our own? When Jowett declares that the achievements of the pre-scientific age betoken "almost a maturity of natural knowledge,"³ he is stating not more but less than the truth.

¹ Fairbanks, 20, 21.

² A. H. Sayce, *Ancient Empires of the East*, 29.

³ *Dialogues*, iii. 416.

5.

5.—*Physiology.* Man's ancestors, says Haeckel, were fish-like Craniotes. Man, said Anaximander, "came into being from another animal, namely the fish, for at first he was like a fish."¹ Sir J. C. Bose's researches into plant-life are the pride of his countrymen, but if we may trust Aristotle, his results are not absolutely new. According to the Greek philosopher, "Anaxagoras and Empedocles say that plants are moved by desire, and assert that they have perception and feel pleasure and pain."² Elsewhere he tells us that in Anaxagoras' opinion plants had motion, sensation, and breathing, while Empedocles "thought that sex had been mixed in them."³ Really these lucky guesses are interminable. Returning to the human body, we have seen that Empedocles (B.C.450) anticipated Sir Oliver Lodge's latest theory of sight, which he ascribed to effluences conveyed to the eye by the fiery matter or aether. The Greek's theory of hearing is equally scientific and deserves quotation in full :—

"Hearing takes place by the impact of wind on the cartilage of the ear, which, he says, is hung up inside the ear so as to swing and be struck after the manner of a bell."⁴

It is acknowledged that Hippocrates (fifth century) was the first and greatest of clinical physicians, but surely Harvey discovered the circulation of the blood and its relation to breathing? Empedocles—he it remembered that he wrote in verse and mingled poetic similes with his physiology—shall answer the question :—

"Whenever the delicate blood speeds away from these (ducts), the air speeds bubbling in with impetuous wave, and whenever the blood leaps

¹ Fairbanks, 13.

² *Ibid.* 220.

³ *Ibid.* 251, 220.

⁴ *Ibid.* 227.

back, the air is breathed out. . . . Thus when the delicate blood, surging violently through the members, rushes back into the interior, a swift stream of air comes in with hurrying wave, and whenever the blood leaps back, the air is breathed out again in equal quantity."

But Empedocles knew more than Harvey :—

"So all things breathe in and out. All have bloodless tubes of flesh spread over the outside of the body, and at the openings of these the outer layers of skin are pierced all over with close-set ducts, so that the blood remains within, while a facile opening is cut for the air to pass through."¹

Subject to correction, we believe that respiration through the skin was a novelty to Western science even in Darwin's day. Still, there was one grand discovery in which the nineteenth century outdid antiquity, namely, in learning that man is descended from the apes. But that, alas, is on its way to the everlasting bonfire!

It is impossible to deal here with Plato's anthropology, if only because it is still unintelligible to modern science. This however may be said, that the Greek philosopher's estimate of human antiquity was far more accurate than Darwin's, and year by year scientific opinion is slowly reascending towards his level. So too as regards the antiquity of civilization, though here the archaeologist has less leeway to make up. History justifies the prophecy that within another generation or so it will be found that in both these matters Plato was in the right.

GIANT ENGINEERING.

In conclusion, a few words may be said as to the mechanical accomplishment in which modernity takes especial pride. For comparison here we turn, not to the exquisite architecture of the Greeks, but to the creations of a far more ancient people. The Great Pyramid, a structure erected four thousand years before Greece was heard of,

¹ *Ibid* 194.

is not only the most gigantic building in the world but the most accurately proportioned. It occupies an area roughly equal to that of Lincoln's Inn Fields (slightly smaller than Dalhousie Square); its sides of about 252 yards have an error of less than .6 of an inch, and its corners are square to 12 seconds of a degree. The daily change of temperature, says Sir Flinders Petrie, makes larger errors than this in a measuring-rod. Its interior arrangements shew coincidences of elevation and proportion such as imply the highest order of engineering skill. Even with their finest instruments of precision, it may be doubted whether modern architects could construct so vast a building with equal exactness; and if they could, would its measurements shew an error of only 1 in 15,000 after the vicissitudes of nearly seven thousand years? This extreme accuracy of workmanship seems to have reached its zenith under the XII Dynasty (B.C. 3366), whose sarcophagi, wrought out of the most stubborn material known to the stone-mason, are so nicely proportioned that it taxes our most delicate instruments to detect an error in them.¹ Granite, basalt, and porphyry were carved with a facility beyond the power of our finest modern tools, and the surfaces of huge masonry blocks were cemented with so consummate a skill that we cannot conjecture how it was done.² Even in the matter of sheer weight-lifting the Egyptian engineers accomplished feats that no modern has attempted. The two great colossi of Amenhotep III, weighing 1,175 tons apiece, were cut out and carried up-stream to Thebes, 450 miles away; while some of the monoliths used in the walls of Baalbec weigh no less than 1,500 tons. And yet we presume to patronize antiquity on the score of our superior dexterity!

¹ *Arts & Crafts of Ancient Egypt*, 81.

² *Petrie, Illahun, Kahun & Carab*, 3.

³ *Ibid.*

THE CRUCIAL TEST.

Take then the sole criterion by which the modern world will consent to be judged, that of simple wealth-production. Surely with all our scientific appliances, our industrious exploitation of natural resources, our never-tiring quest after economy and efficiency, here at least we may claim an absolute superiority over the ancient world? The answer shall be furnished by a few lines taken from a recent scientific handbook. Professors Geddes and Thomson tells us that calculation of the capital value of the ancient Mediterranean terraces

"brings out the marvellous yet credible result that the actual economic wealth of this remote prehistoric world far exceeded that of the Mediterranean to-day; and this not merely in its agriculture, or with roads and railways thrown in, but with the existing cities as well!"¹

No comment can add to the force of this statement.

9.

Here then is a series of uncoordinated but evidently related facts, scattered about in all sorts of odd quarters, not indeed to be collected without some little difficulty; and the catalogue is so far incomplete that no allusion has been made to the greater claims of antiquity upon our admiration. But the facts reviewed suffice for present purposes. Taken by itself, any of them must excite wonder; taken together, what is their cumulative effect? What must we think of an age familiar with evolution and the eternity of motion; with the nebular hypothesis, the heliocentric theory, and the existence of dark stars; with the properties of aether, the structure of the atom, and the law of periodicity; with the nature of man's physical ancestry, the functions of breathing and circulation, and the theory of sight and hearing; with the sex and vital

¹ *Evolution*, 180.

processes of plants; with the history of the earth's surface, and the causes of winds, earthquakes, and rainbows; with the art of evoking the lightning; with the properties of oxygen, potassium, and sodium; with mechanical methods in some respects superior to our own; and finally, with a far greater skill even in wealth-production? What reserves of undisclosed knowledge does not all this imply! We call the nineteenth century the era of enlightenment; yet on all the greater issues the science of that boasted age was nescience, nor do we need to be reminded of the suffering into which its errors have lately plunged humanity. But on all those issues pre-scientific antiquity was in the right, and it is only because its wisdom has been forgotten and its counsel despised that civilization has been brought to the verge of ruin. "No doubt but we are the people and wisdom shall die with us;" but unless we can get rid of the false Baconian rule and rediscover the ancient art of "lucky-guessing," we shall perish before our *illuminati* have shaken off their delusions. The senses are bad witnesses!

THE ANCIENT METHOD.

A word must be said in conclusion as to the method by which antiquity acquired its knowledge. As easy to describe as it is difficult to learn, the forgotten art may be defined as the intensive cultivation of faculty. It was practised only by those endowed with the necessary mental and moral gifts, and as the training comprised *inter alia* a peculiarly rigorous mode of life, it could never attract the common man. The discipline developed in time a capacity such as we now call genius, whose possessors were distinguished from the multitude as the few wise from the many foolish. The scientific achievements of antiquity, not less than its accomplishments in religion and morality, were the fruit of this development; for

truth is one, and be it religious, philosophical, or scientific, the path that leads to it is one and the same. Limitations of space do not permit us to pursue the explanation or to review the evidence by which it is supported, and it can only be added that the secrecy observed by the initiate was partly due to the impossibility of communicating his knowledge to those of lesser attainment. Experience cannot make itself intelligible to non-experience, and while there were other more imperative reasons for the reticence, the poverty of language was by itself sufficient to impose silence on him who heard unspeakable words not lawful for a man to utter.¹

¹ The aim of the education prescribed by Plato was to cultivate faculty; J. A. Stewart, *Myths of Plato*, 172. The curious may consult *Rep.* 518-529, 533c, *Phaedr.* 244-5 248d, 262, *Meno* 81a, *Tim.* 71c, *Phaedo* 65c, 67a, 82c. *Phileb.* 16c, *Ep.* 340c; Plutarch. *De Is.* 2.81, *De Defect. Orac.* 40; Philo. *De Vit. Cont.* 891p/473m, et mult. al.; Plotinus, *Enn.* vi. 9; Iamblichus, *De Myst.* iii. 2, 3, 4, ix. 4; Macrobius. *In Somn. Scip.* i. 3, 17, etc., with Bergson, *Introduction to Metaphysics*, 58-9; *Creative Evolution*, 252, 282, 362. It is desirable to refer to the original Greek, our translations all being vitiated by the habit of substituting that which the translator thinks his author meant to say for that which he actually did say. Even Jowett is not immune from the failing.

VANISHED CONTINENTS.

I.

EASTER ISLAND AND THE PACIFIC.

1.

After many years' unmerited neglect, Easter Island has become the subject of scientific attention. Early in 1914 a party headed by Mr. and Mrs. Scoresby Routledge spent some sixteen months on the island, where they conducted the patient inquiries recorded by Mrs. Routledge in *The Mystery of Easter Island*. Ten years later they were followed by Dr. J. Macmillan Brown, Vice-Chancellor of the University of New Zealand, whose book *The Riddle of the Pacific* was issued from the press a year ago. It is not at first apparent why Dr. Brown should have thought it necessary to re-open investigations so exhaustively conducted only a few years before, nor does he himself explain the reason. But a study of the chapter in which Mrs. Routledge deals with the history of the island resolves at least this minor mystery. Though not inexpert in anthropological research, Mrs. Routledge was conscious of no incompatibility between a handful of shiftless savages and a profusion of carved stone monuments such as modern India might find it hard to imitate. She was content to dismiss the subject by "assuming for the sake of argument that the stone figures were the work of the ancestors of the people of to-day"¹—an assumption which may be likened to regarding Westminster Bridge as the work of the ancient Britons. Dr. Macmillan Brown's more philosophical mind perceived the futility of this supposition, and his visit was doubtless prompted by a desire to discover some less perfunctory explanation of the marvel.

¹ p. 291.

THE ISLAND.

Easter Island is a triangular mass some thirty-five miles in circumference, standing in utter isolation in the midst of the Pacific. The world has few more lonely spots. The nearest inhabited lands are the Paumotu or Low Archipelago lying about 1,500 miles to the north-west and the South American coast some 500 miles further to the east. Pitcairn Island, 1,200 miles away, though once occupied by a people akin to the Easter Islanders, was uninhabited when discovered in 1767 and has only lately been repopulated. Remote from all the trade routes and all the centres of ancient industry and commerce, Easter Island offers no temptation to enterprise, nor has it any attractions of its own to make up for its hopeless desolation.

The land is utterly infertile. It has never been afforested and has no trees of more than a few feet high. The surface is covered with decomposing lava, there is no humus, no indigenous mammal, land-birds and even earthworms are wanting, sea-birds are relatively scarce, and the surrounding ocean is sparsely populated. The coast presents no harbours, hardly even a convenient roadstead. There are no fresh-water springs on the island proper, though one or two are still found on the sea-shore below high tide level, and the inhabitants depend for their supply on the rain accumulated in the old volcanic craters or collected in gourds and other vessels. Even pigs and goats can hardly pick up a living in this dreary wilderness. Mrs. Routledge found numbers of imported sheep and cattle on the island, but all had disappeared before Dr. Brown's visit, some traded off to passing customers, the remainder consumed by the starving inhabitants or dead from lack of nourishment. For Easter Island is a hungry spot. Till recently, at any rate, the natives lived in perpetual semi-starvation, eking out their staple food of sweet potatoes with fowls, shell-fish, cuttle-

fish, sea-birds' eggs, rats, insects, and anything that teeth could bite and stomach digest. That a people situated in this land of poverty should have produced the architectural and sculptural works by which they are surrounded seems an insult to common sense. But the facts are facts.

THE PEOPLE.

Nothing can be learnt of their antiquities from the present inhabitants, whose condition has been greatly benefited by philanthropic effort during the past half century, but who have forgotten what little they ever knew in the process of betterment. Dr. Brown therefore sets himself to describing conditions of life on the island before the advent of the missionaries.¹ He draws a picture of swift steady decadence. The population numbered some two or three thousand souls when Europeans first visited the place, but has now shrunk to one-tenth of that number. Accumulation of wealth was impossible, insufficient food had lowered the general physique, and the difficulties of existence, so far from breeding hardihood and resource, led to nothing but a cult of transient pleasure. The people were shiftless, improvident, and incapable of discipline; they had no law, no chiefs, no social organization, their king was the merest figure-head, their normal state a life of purposeless warfare. Unstable and puerile in disposition, they combined a highly developed talent for thieving with a full measure of South Sea licentiousness. Their religion had dwindled away into little but fear of malevolent ghosts. They practised no manly exercises, their women did all the work, infanticide and abortion were common, the aged were stoned to death, and cannibalism—the eating of man by man, not in the performance of high religious ritual or for the sake of ingesting the

¹ pp. 33f., ch. xi. etc.

victim's virtues, but for the sheer gratification of appetite—was a frequent and highly prized indulgence. Dr. Brown indeed describes it as a measure of necessity to feed a starving population. No more terrible picture of degeneracy can be imagined, and it is certain that but for the arrival of the white man this isolated remnant of Polynesians must soon have suffered the extinction that overtook their kinsfolk on Pitcairn Island.

2.

When therefore the land occupied by these miserable savages is found bestrewn with monuments betokening wealth, organization, and high engineering skill, when no memory has survived of the sculptors and their colossal statues receive not even the tribute of superstitious reverence, the first conclusion is beyond all question. The state of Easter Island and its people was once far other than it is to-day. With Mrs. Routledge we may assume that the platforms were built and the figures carved by the ancestors of the present inhabitants, but this is a statement, not a solution, of the problem. The monuments are as incongruous with the extant islanders as Einstein's theory with the kindergarten. Who were the architects who designed the terraces, whose was the skill that directed and the discipline that controlled the many thousand workers employed on the task? Whence did they draw their food supplies, the tools with which they wrought the stubborn basalt, the timber and cordage for moving the huge stone blocks? What was the object of this vast expenditure of wealth and energy, and what were the causes that swept a virile and vigorous people into oblivion, leaving none behind but a few starveling savages who have not even preserved the tradition of their greatness? Such is the mystery of Easter Island, and Mrs. Routledge's investigations, though they have supplied the anthropologist with

useful material for study, have contributed but little towards the solution.

THE SCRIPTS.

And there is more than the images and terraces to be explained. If as we are told the invention of writing marks the advent of civilization, the prehistoric Easter Islanders must be ranked among the civilized peoples. According to the native tradition the culture-hero Hotu Manua brought to the island sixty-seven *rongo-rongo* or tablets inscribed with the sacred script, and these were carefully preserved and copied by a special class entrusted with the duty. The originals have been lost, but many of the copies are still in existence. The script, which is well formed and regular, is apparently ideographic.¹ In appearance it suggests the hieroglyphs of Central America more than any other known character, but the resemblance is hardly even superficial. It was carved on wooden blocks, and although schools were maintained until about sixty years ago for the purpose of teaching pupils to engrave and interpret the symbols, this learning has all disappeared nor can the most sedulous inquiry elicit any recollection of it. Moreover, Mrs. Routledge was able to obtain a second and quite different script from an old man living on the island at the time of her visit. Unfortunately he was in his last illness when the matter came to her knowledge, and nothing intelligible could be ascertained from him before he died.² There is a further complication in the fact that although the Easter Islanders have or had these scripts, they know nothing of the *quipu* or record of knotted strings. But all other Polynesians employ the *quipu*, while none of them

¹ Dr. Brown gives several photographs of the script. Grey found markings in an Australian cave which he describes as almost unmistakably writing: *Journals of Expeditions*, i. 214.

² *Mystery of Easter Island*, 250-2.

uses a script except the inhabitants of Uleai and Faraulep, two distant islands where Mr. Brown has discovered a sixty-character syllabary quite unlike any other in the world.¹ The Easter Island scripts clearly belong to the same provenance as the architectural remains, and point with certainty to the previous existence on the island of something approaching civilization.

3.

Londoners are familiar with the massive bust of Hoa-haka-nana-ia standing in the portico of the British Museum. It is hardly a fair specimen of the Easter Island statues, from which it differs in various important particulars. Many of the others are far larger, some of them exceeding sixty feet in height and weighing fifty or sixty tons. Though the general effect is barbaric, the carving of the figures is far from unskilful. Symmetry and balance are carefully maintained. The features express haughty scorn and imperious will, says Dr. Brown; "it is the expression of victorious warriors and empire-makers, and seems to indicate a series of Alexanders looking for other worlds to conquer." The island is a gigantic mausoleum, he continues; "for more than thirty miles you can ride and never come to the end of these titanic attempts to immortalize the great dead."² Nevertheless, the images have all toppled over and most of them are broken, for they were so insecurely placed that nothing could have saved them from destruction. "Why sculptors should carve these titanic figures and architects should have them safely conveyed to their platforms only to set them up as gigantic nine-pins for tempests of the air or the human mind to bowl over, is one of the deepest mysteries of Easter Is-

¹ p. 52.

² pp. 17. 4.

land.”¹ In nearly every case the images are sectional—half-men divided laterally from crown to buttocks, with no carving except at the front and sides—and their design strongly suggests, as Dr. Brown conjectures, that it was intended to sink the lower part in the ground and support the image from behind by an earthen rampart, against which the face and torso would stand out in bold relief. In no case was the plan carried out, for the work was abruptly cut short as if by some awful catastrophe. All was smitten by sudden paralysis as a man is stopped in his career by a bullet through the heart. “Tools lie as they were thrown away the day the workshops fell silent. Images lie in all stages of creation, from measuring and roughing out to preparation for launching, as if a tremendous blast of poison-gas had asphyxiated all the workmen and left them to sleep the everlasting sleep of the giants they were shaping.”² But the statuary is of no great age, and the island shews no signs of any recent cataclysm. What is the explanation?

NAVEL OF THE WORLD.

The facts present a problem suggestive of the murder mysteries so popular in current fiction. Degraded savages surrounded by relics of high civilization; high civilization evolved in a region incapable of producing or supporting it; grandiose schemes frustrated as if by fire or earthquake; no visible traces of any such disaster. Dr. Brown propounds an answer to the riddle. *Te-pito-te-henua*, the native name for the island, means “the navel of the world,” and taking the word as recording an historical fact, he supposes that this desolate volcanic peak once formed the centre of a busy archipelago. The islands of the Pacific

¹ p. 11.

² p. 15.

are in a state of continual submergence and upheaval, and Dr. Brown adduces strong reasons for believing that only two or three centuries ago there were considerable tracts of land in the vicinity of Easter Island.¹ In 1576 the great Spanish explorer Juan Fernandez came upon what he thought to be the coast of a vast continent in the south-eastern Pacific—a country with large rivers and inhabited by a white-skinned and well-clad people differing in every way from those of Chile and Peru. Some hundred years later the Dutch navigator Davis reported the existence of high lands five hundred leagues from the American coast in latitude 27° south, that is to say, in the neighbourhood of Sal-y-Gomez, a small rocky islet lying about three hundred miles east of Easter Island and now hardly emerging above sea-level. No trace of these lands was to be found when Admiral Roggewein visited the region in 1722, but Fernandez and Davis were trustworthy observers, and their statements are not to be dismissed as idle inventions.

A FOUNDERED EMPIRE.

Easter Island was certainly not the land that Davis saw, and Dr. Brown infers that some years before the date of Roggewein's visit an extensive archipelago lying east and south of Easter Island was submerged beneath the ocean. In his opinion Sal-y-Gomez is the sole remaining fragment of Davis Land, and it is a remarkable fact that the Easter Islanders, whose wretched canoes are incapable of any lengthy voyage, have preserved a knowledge of this remote islet. Their traditions also record the disappearance of other islands in the vicinity of their own, and Dr. Brown concludes that in the seventeenth century Easter Island was indeed the navel of a great archipelago. It was the rulers of this oceanic empire who designed to

¹ pp. 41f., ch. vii.

make of the island a mausoleum for their dead; it was they whose wealth and organization maintained and directed the army of quarrymen, sculptors, and slaves, and whose features are reproduced in the mysterious statuary. Overwhelmed by some great oceanic upheaval, the neighbouring islands vanished beneath the waters, and all their inhabitants perished except a few survivors headed by the Hotu Manua of tradition, who sought refuge on the one solitary spot spared by the catastrophe. The disaster was witnessed by the Easter Islanders, food supplies stopped short, anarchy broke forth, and the work of the stonemasons and porters came for ever to an end. Hotu Manua succeeded in restoring some kind of order on the island, but its inhabitants were doomed to swift decay, and within a century they were reduced to the miserable condition in which the European found them.

Without reviewing the other evidence adduced in its support, it must be acknowledged that Dr. Brown's interpretation of the facts is reasonable, probable, and sufficient. It accounts for the wealth and organization that produced the statuary, for the sudden cessation of the work, and for the degeneracy that has overtaken a people of good Polynesian stock, nor is there anything to set against it but the now moribund prejudices of a school which refused to admit any considerable change in the surface of the earth since her crust was first consolidated.

A GREATER PAST.

But the explanation is incomplete. There is evidence which proves that Hotu Manua's culture was itself the decadent heir to an older and higher civilization, whose remains evince a more accomplished dexterity and a greater command over natural resources than are visible in all the giant images that bestrew this melancholy relic of the

past. Dr. Brown records the facts but appears to miss their significance. He notices that the images bear no relation to the *ahus* or megalithic terraces, even remarking that "there seems to have been a disagreement between the sculptors and architects."¹ More than one-half of the *ahus*, he says, are without statues and were never meant for statues, and if the images were intended to be sunk in the ground and stand out in relief against an earthen backing, it is certain that the use of the *ahus* as pediments was either an afterthought or a temporary makeshift. In other words, the sculptors were not contemporary with the architects. The terraces were finished and abandoned long before the sculptors set to work, and formed no part of any common design.

The inference is confirmed by stronger and more striking evidence. The images are carved out of a stratified conglomerate—probably a volcanic breccia laid down in water. It is a soft and friable material, and the sculptors had so little difficulty in working it that in Mrs. Routledge's estimate the roughing-out of an image need not have required more ² than a fortnight's labour. Similarly, the hats with which in some cases (but not in all) the images were to be crowned were fashioned out of a yet more docile material—a red volcanic tufa as brittle and perishable as the conglomerate. But the platforms are built of hard uncompromising stone, and have withstood the fury of the elements for unknown ages.

CARVED BASALT.

We have then to deal with a people of artistic capacity but no great skill in masonry, and must infer that the sculptors were the heirs, not the authors, of the vanished culture. The fact is proved by the tools they used. Chisels and

¹ p. 19.

² *Mystery of Easter Island*, p. 181.

adzes made of stone and obsidian lie scattered about the hill-side just as their owners threw them down, and these were quite adequate to the work of carving the images and hats. But they would have been as useless as wooden knitting-needles for dealing with the material of the *ahus*. These are constructed of hard black basalt—of “enormous squared and tooled stones that turn the edge of the toughest modern steel,” says Dr. Brown. “They must have been cut and tooled to exact measurements or plan. There is no evidence of chipping after they have been laid. Every angle must have been measured with scientific precision before the stones were nearing their finish,”¹ for as no cement was used, bad workmanship was not to be slurred over by the specious methods of the jerrybuilder. Many of the blocks measure 10 ft. by $2\frac{1}{2}$ ft. by 2; some of them are rounded on one side and others grooved, whilst most of them are drilled with beautifully rounded holes two inches in diameter. The description is conclusive. The architects were men of an older and superior culture to the sculptors, and if the statuary points to a time when Easter Island was the centre of an archipelagic empire, the terraces bear witness to some earlier epoch when these empty stretches of the Pacific were occupied by a great continental civilization comparable with that of Egypt. The scripts and ideograms, even the absence of the barbarous *quipu*, point to the same conclusion.

4.

At this point the student turns to the geological record, in the hope of learning something as to the history of the island. But the information here is meagre and disappointing. Mrs. Routledge's party was accompanied by an expert

¹ pp. 1, 8, 258. “A building like Westminster Abbey would not need a tenth part of the labour in tooling and handling and erecting that these platforms took; p. 2.

geologist and Dr. Brown himself has some understanding of the subject, but in neither case was any proper inquiry undertaken. The observers were content to notice that the surface of the island is volcanic and (in Dr. Brown's case) that it stands on a rock foundation, but that was all. The fields of lava, together with the rounded appearance of the hills and the absence of any sign of submerision or afforestation, led them to conclude that Easter Island is "geologically young."¹ The description is not only indefinite—geological youth may mean anything from an early Tertiary to a late Quarternary deposit—but apparently incorrect. Not many hundred years perhaps have elapsed since the volcanoes vomited forth their lava, but what of the formation through which the eruptions burst? Dr. Brown describes it as "a hard black basalt that forms the sea-level foundation of the island and resists so sturdily the assaults of the surge, at least on the sea-coast."² The Pacific surge is not easily resisted, and rock of this stubborn and durable character is almost certainly of Archean antiquity. There is nothing to suggest that the island dates from the eruptions—indeed, the fact that it has never been submerged is proof to the contrary. Nor can any inference be drawn from the absence of humus or forest life in a region so lately flooded by the devastating lava streams. The evidence therefore is deplorably imperfect, but such as it is, it seems to indicate that Easter Island has existed at least since Secondary times, when it doubtless formed part of the great continent that then spanned the southern Pacific. It seems certain that the civilization of the *ahus* and the scripts dates back to the pre-volcanic era, when there was neither conglomerate nor tufa at the service of the architects; but this, the point to which inquiry should

¹ *Mystery of Easter Island*, p. 131.

² p. 25.

have been specifically directed, was unfortunately overlooked. •

THE VANISHED CONTINENT.

The Polynesian inhabitants of the island occupied the easternmost outpost of their widely distributed race. Hawaii and New Zealand were their northern and southern limits, and on the west they reached almost to the coast of Africa. Madagascar, it may be noted, is mainly of Archean formation. Its mountains are composed of granite, gneiss, and basalt, and like the islands of the Pacific it has been the scene of violent volcanic disturbance. Mauritius again is a volcanic island standing on a basaltic foundation, but the geology of the whole area is too little understood to form the subject of useful discussion. The palæontological and biological evidence however, proving the near relationship of certain fauna of Madagascar and the Mascarenes to those of India, Australasia, and the Pacific, is exceedingly strong. Thus, to take only one instance, the giant tortoise of the Galapagos so closely resembles that of Mauritius—14,000 or 15,000 miles away by sea—that Darwin regarded the two as identical.¹ Lydekker therefore, writing some twenty years ago, considered it beyond question that during the Tertiary Age Africa and South America were connected to the southward by ² way of Australasia.

THE LEMURIANS.

Now the Malagasy are admittedly a Polynesian people. They are mingled with Melanesian elements just as in the Pacific islands, and physique, habits, customs, language, and traditions identify them with their brethren of Samoa and Hawaii. How came these South Sea island-

¹ *Voyage of the Beagle*, ch. xviii.

² *Enc. Brit.* 10th ed., xxxiii. 938. The fact is no longer questioned.

ers to colonize a country in the extreme west of the Indian Ocean, at so vast a distance from their presumable country of origin? No one has yet pretended to answer the question. There are fairy tales of Asiatic emigrants making their way into the southern archipelagoes, and even of Chinese junks traversing the immeasurable reaches of the Pacific until their sailors landed on the shores of California and Peru. But Madagascar is conveniently forgotten in these romances. If Sir Arthur Keith is right in saying that the various races of mankind have been evolved in or near the regions they now occupy,¹ there is no escaping the conclusion that the present inhabitants of Hawaii, New Zealand, the Pacific archipelagoes, and Madagascar are the remnants of a people that once occupied a continent stretching half-way round the southern hemisphere. Such a continent, we know, existed in early Tertiary times, and the theory entails the unwelcome corollary that man was in existence in the Eocene Age and is therefore older than any ape. If such be the meaning of Easter Island and Madagascar, anthropologists would find it profitable to desist from poring over their exiguous collection of fossil skulls and turn instead to the voluminous and as yet uninterpreted evidence of Polynesia.

5.

For Easter Island is not the only witness to the past. Similar but inferior statuary has been found on the neighbouring Pitcairn Island, whose inhabitants may have been marooned there by the same catastrophe that overwhelmed Hotu Manua's home. Three hundred miles further to the north lie the Marquesas, tenanted by the most savage of all Polynesian peoples, closely akin in many ways to the Easter Islanders with whom they shared a

¹ *Supra.* p. 24.

common culture. They built mightily in Hiwa-
 oa of old, writes F. W. Christian of the Marquesan
 capital, and he tells us of "remains of altars and
 burial places, ruined platforms of mighty basalt
 slabs, with great grim statues standing solemn
 and unmoved in the darksome solitudes. Some
 of the more ancient *pae-paes* must have cost tre-
 mendous labour, built as they are of dozens and
 dozens of ponderous basalt blocks laid together
 with the greatest nicety."¹ In *Green Islands in
 Glittering Seas* Mr. W. Lavallin Puxiey, who has
 just returned from visiting this region, writes
 of massive effigies in the Austral Islands and the
 Solomons, double rows of pyramids in the Lad-
 rones carrying a roof of huge stone hemispheres
 on their truncated tops, and a gigantic trilithon
 in Tongatabu with the horizontal stone wonder-
 fully mortised into the uprights.² Pass to the
 Caroline Islands, and we come upon yet more
 amazing relics of the vanished culture. The
 ruins of Lele, says the encyclopaedist, "present
 the appearance of a citadel with cyclopean ram-
 parts built of large basaltic blocks."³ Basalt,
 least accommodating of the mason's raw mate-
 rials, was everywhere the plaything of these for-
 gotten architects. "There are also numerous
 canals, and what look like artificial harbours con-
 structed amid the shallow lagoons." At Ponape
 the ruins, now half buried in the water, are on a
 yet larger scale. The walls of the main building
 near the entrance of Metanalim harbour form a
 massive quadrangle 200 ft. on all sides, with inner
 courts, vault, and raised platform with walls 20 to
 40 ft. high and from 8 to 18 ft. thick. There are
 also numerous canals from 30 to 100 ft. wide, while
 a large number of islets, mainly artificial, cover-
 ing an area of nine square miles, have all been

¹ *Eastern Pacific Lands*, 81, 107.

² *p.*

³ *Enc. Brit.* v. 380.

built up out of the shallow waters of the lagoon, with high sea-walls composed of the same huge basaltic prisms. Elsewhere great breakwaters had been constructed, the fragments of which may still be seen stretching away for a distance of from two to three miles. This in the midst of cannibal savagery !

CHILE AND PERU.

Crossing to the mainland, Dr. Brown adduces strong reasons for deriving the culture of western South America from the Pacific.¹ There is no trace of an American provenance in Polynesian economy. The common food-plants of both regions—the sweet potato, the banana, possibly also the cocoa-nut—are of South Asiatic or Pacific origin. The *umu* or earth-oven, a distinctively Polynesian appliance, is found among the Araucanians, and the stone adze used throughout the archipelagoes has made its way at least into Chiloe (the extensive group of islands off the coast of Chile), where it is known by its Polynesian name of *loki*. The Chilote canoe also resembles that of the Pacific. The *quipu*, or knotted string record, is found in both regions, but the fact that it was unknown to Easter Island—the nearest point to the American coast—suggests that the invention travelled from east to west rather than in the contrary direction. Easter Island was literate and had no need of it. Finally, there is an ancient cemetery near the ruined city of Grand Chimu (Truxillo, coast of northern Peru) which in Dr. Brown's opinion could have been filled by none but Polynesian dead. Against all this there is nothing to be alleged on behalf of an American origin for the common culture, and Dr. Brown's conclusions receive strong support from the discovery in Patagonia of human remains with characteristics not observed among South American races but greatly re-

¹ ch. xxiii.

sembling those of certain Pacific peoples.¹ If we are to judge by the absence of all American products and arts in the Pacific, he writes, the impetus did not come from America; "it must be the other way, as we find purely Polynesian products and arts on the coast of America and evidences that the Polynesian warriors swooped down upon the wealthy cities that were approachable by sea."² But it is hardly possible that raiders from a group of little islands more than two thousand miles away should have made any great impression on the peoples of a vast continent, much less impose upon them their presumably inferior culture. Are not these rather the signs of civilization invading barbarism?

6.

The megalithic culture of South America may therefore be approached with a strong presumption in favour of its Polynesian origin. There are many striking points of similarity between the structures of the two regions. It is familiar knowledge that the same truncated pyramids are found in Fiji and Peru, in the Ladrões and Yucatan. The architecture of Central America, writes Christian, recalls that of Metanahim;³ the walls of Pachacamac and Tiahuanaca, says another observer, are all built of hewn stone like those of Hiwa-oa and Kusaie.⁴ Dr. Brown pursues the comparison. Cuzco like Easter Island called herself the navel of the world.⁵ The pyramidal sepulchres of Moche (near Truxillo) offer a complete analogy to those of Holy Tonga. "Every feature of Polynesian great-stone work is repeated in the great-

¹ Lydekker, *ubi sup.*

² p. 269.

³ *Caroline Islands*, 80.

⁴ R. Brown, *Countries of the World*, iv. 43.

⁵ Cf. Tabor, Nebo (*nabha*), Omphale, etc.

stone work of the Andes;" there is the same combination of giant statuary with massive walls built of blocks "carefully cut to fit each other's irregularities" and laid together without cement. The identity of inspiration is beyond question, and we may conclude with certainty that the Peruvian architects learnt their art from Polynesia.

TIAHUANACA.

But Dr. Brown did not suspect the high antiquity of the megalithic culture, and therefore missed the solution of the greater problem. When Lemuria spanned the Pacific, South America was in the making. It was not united to its northern neighbour until the early Miocene, when the cataclysms that destroyed the older continent bridged the Isthmus of Panama and threw up the great mountain ranges of Central and South America. The evidence indicates that Polynesian influence had made itself felt upon the mainland before the Andes came into existence. Tiahuanaca, the ruined Peruvian city, standing in silent desolation among the mountains, is a mystery in itself. It covered a wide area, says Sir Clements Markham, and was built by expert masons who employed enormous stones in its construction.¹ The world has nothing to shew in the way of stone cutting and fitting to equal that of the Inca structures. "The moving and placing of such monoliths point to a dense population, to an organized government, and consequently to a large area under cultivation, with arrangements for the conveyance of supplies from various directions." As in the case of Easter Island and the Carolines, "there must have been an organization combining skill and intelligence with power and administrative ability." • In the days when Tiahuanaca was built, continues Markham, the Andes must have been several thousand feet lower than they

¹ *Incas of Peru*, 23.

are now, for at its present altitude of 12,500 ft. the region could never have produced the food necessary to support so large a population.¹ It has been steadily rising for centuries past. Bleak and sterile, the country is now incapable of maintaining more than a few wretched mountaineers, but when it produced the wealth that created the ruined city, it must have enjoyed a warmer sun and a less rarefied atmosphere. In earlier times the requisite conditions prevailed. Ulloma then sheltered the mastodon—Tarapaca, now a waterless desert, the forest-loving ant-eater, and in those days "maize would ripen in the basin of Lake Titicaca, and the site of Tiahuanaca would support the necessary population."² If the megalithic builders lived under those conditions, Markham concludes, the problem is solved, but otherwise it remains an impenetrable mystery. It is useless to shrink from an inevitable inference, however distasteful to preconceived opinion. Tiahuanaca is older than the mountains among which it stands. The solution, if it be accepted, carries with it the explanation of a minor mystery—that of the elephant-headed figures found in Central American sculpture. Not from the vague report of strangers did the sculptors learn of the elephant race, but from their own ancestors—men who stood face to face with Behemoth in the forest and like our modern trophy-hunters pursued their quarry to extinction.

THE SOUTHERN SOURCE.

Easter Island and Madagascar are in the south, the continent that once united them was in the south, Tiahuanaca and Titicaca are in the south, the Peruvian culture-hero Manco Capac came from the south, the lands* that Fernandez and Davis saw were in the south, the remains of

¹ *Ibid.* 29.

² *Ibid.* 37-8.

Pacific culture found in South America lie almost entirely in the south. The evidence all points in the same direction. It may therefore seem more reasonable to derive Polynesian civilization from this southern continent than from Neolithic savages descending into the archipelagoes from Korea and Japan, inventing the scripts of Easter Island and Uleai, carving basaltic blocks which (in Dr. Brown's words) "European masons would find it hard to work even with tools toughened by admixture of the rare metals,"¹ and forthwith disappearing for ever from human ken. Or shall we suppose with other learned men that the seeds of civilization were carried throughout the world by Phœnician seafarers who instructed their converts in an enormous variety of creeds doubtless manufactured for the purpose, and like their Japanese rivals vanished away without leaving behind them a syllable of their own language? It is well that scientific men should follow Huxley's advice and exercise the imagination; it is even better that they should cultivate common sense. The history of man is long and intricate, nor can anything be learnt of his evolution until our conceptions are adapted to its antiquity and complexity.

¹ p. 2.

VANISHED CONTINENTS

II.

LOST ATLANTIS

1.

Sea to the Greek mind was concrete mystery—the source of sex, the home of Thetis, the hiding-place of Dionysus, the instrument employed by inscrutable Zeus to punish wayward mankind. The symbol was well chosen. They that do business in great waters see the works of the Lord and His wonders in the deep, nor shall the secrets of the past be revealed until the sea gives up the dead that are in it. Eocene humanity lies buried beneath the waves of the Pacific; its Miocene successors were overwhelmed by the sister ocean. It is strange that the second great act in the drama of human history, though later than the first by perhaps a million years, should have left behind it so much fewer traces. There are no bands of survivors scattered over half the planet to bear witness to their Atlantean ancestors, no giant statuary or megalithic ruins to record their attainments. Atlantis has disappeared so completely that it was long regarded as a product of the imagination. But a change is overtaking scientific opinion, and at the present moment it may be said that of those who have given serious attention to the subject the believers are more numerous than the sceptics. *E pur se muove.*

PLATO'S STORY.

The evidence has been collected and reviewed by Mr. Lewis Spence, the well-known writer on ancient mythologies, in a work published a few months ago. *The Problem of Atlantis* is a

modest little book in comparison with the weighty volumes that deal with Easter Island, but there is more to be said about the subject than one might think. Mr. Spence considers it from various standpoints, first detailing Plato's famous account of Atlantis in the *Timæus* and the *Critias*, passing next to the geological, biological, and anthropological evidence, and concluding with the record of the great catastrophe as preserved in culture and belief. In the upshot he decides that the Greek narrative is a record of fact, and indispensable to the understanding of European history. Now Plato's story is unlike anything to be found elsewhere in his writings. It is told at length and in considerable detail, the disappearance of the island is definitely dated, and the narrator takes pains to insist on the historical character of the events described. The account is avowedly drawn from Egyptian sources, Critias stating that he was still in possession of the original manuscript in which Solon set down his conversation with the priests of Sais. Plato "points no moral to adorn his tale, but draws a fairly complete picture of a civilization which had as few points of resemblance to the Greece of his day as it is possible to imagine,"¹ and Mr. Spence concludes that he was using material which he had good reason to regard as historical.

Nine thousand years ago, runs the story, a great archipelago stood in the Atlantic Ocean near the Pillars of Hercules—the modern Straits of Gibraltar—"from which you might pass through the whole of the opposite continent which surrounded the true ocean." It was the scene of a mighty empire, "which had rule over the whole island and several others, as well as over parts of the (opposite) continent." But not content with their own territories, the islanders con-

¹ p. 12.

quered the neighbouring tracts of Europe and Africa as far east as Italy and Egypt, and presently attacked Greece itself. The invaders were beaten off by the courage and address of the Athenians, who finally expelled them from the whole of their possessions in the Mediterranean area. Soon afterwards a terrible cataclysm occurred, accompanied by floods and earthquakes. Atlantis was swallowed up by the waves, leaving nothing behind her but mud-banks covered by a sea too shallow for navigation.

A BUSY CITY.

Critias proceeds to describe the Atlantean empire. The country was precipitous towards the sea, and surrounded by mountains celebrated for their height and beauty. The capital city stood on a central island encircled by alternate zones of land and water spanned by connecting bridges. It was built of white, black, and red stones quarried from the native rocks, and its walls were covered with brass, tin, and orichalcum. In the centre of the citadel was a temple dedicated to Poseidon encrusted with ivory, gold, and silver, and containing an image of the god erect in his chariot drawn by six winged steeds. Golden effigies of his ten wives and sons stood about the edifice. Fountains and baths fed by hot and cold springs surrounded the temple, a race-course ran round the island, a great sea-wall defended the canal giving access to the harbour. Covered docks sheltered numerous shipping, and throughout the day the din of commerce arose from the busy streets. An account follows of the laws, worship, and organization of the community, which was governed by twelve kings, each absolute in his own island. Sacred bulls were maintained, and the national deity was placated by their annual sacrifice.

Other ancient writers refer to the vanished empire, but in terms which suggest that they are merely borrowing from Plato. Plutarch however seems to preserve a different tradition when he writes of Ogygia and other adjacent islands lying five days' sail from the west of Britain and at a distance of some five thousand stadia—or say six hundred miles—from the great continent of Saturnia. As in Plato's account, there is clear evidence here that America was known to the Greeks at least by hearsay, and if we remember aright, there is another explicit mention of it in Plutarch's *Moralia*. Proclus also speaks of an archipelago in the ocean bordering western Europe, whose inhabitants preserved a recollection of the Atlantean empire. Such are the chief references to the subject in classical literature, and in the light of modern knowledge they are not destitute of probability.

2.

That Plato's story is of Nilotic derivation is proved by the incidental knowledge of Egyptian creeds and customs displayed by the narrator and now confirmed by modern research. The role ascribed to the Athenians as victors over the Atlanteans was doubtless introduced as a concession to Greek vanity, though it by no means follows that the men who beat off the invaders (and are themselves said to have perished in the cataclysm) were not the predecessors of the Greeks in the Ægean. Nor need the story be distrusted because the invasion is said to have taken place thousands of years before the supposed date of the first Egyptian dynasty. Not only is our chronology prior to B. C. 2000 highly speculative, but it is known that civilization existed in the Nile valley for hundreds of centuries before the days of King Menes. In all such inquiries the

judgment is biased by the medieval prejudice in favour of restricting antiquity within the narrowest possible time-limits—a prejudice born of sheer ignorance and from which Mr. Spence himself is not exempt. Ancient accuracy is continually justified by later inquiry, and since in other scientific matters Plato has proved himself better informed than his Victorian critics, his dates deserve to be treated with respect.

THE CARTHAGINIAN MODEL.

As described by Critias, the Atlantean capital was wholly unlike any Grecian city, so that if Plato was not relating historical fact, he was drawing upon his imagination. But French research has lately been directed upon Carthage, and the plan of that sea-port as reconstructed by M. Paul Aucler resembles Critias' description in many striking respects.¹ Like Carthage, Atlantis depended for its safety on a secret situation, that of an island within an island; reminding us that Aristotle and Strabo mention a secret city in the Atlantic known to the Phœnicians as a refuge in times of danger. Both had a citadel hill encircled by zones of land and water connected by bridges, with a canal leading to the sea. In both cases the entrance to the harbour was masked by a great sea-wall, the docks were roofed in, and large cisterns were constructed for the supply of drinking-water and baths. A comparison of these features, says Mr. Spence, leaves no doubt that the plan of Atlantis was substantially the same as that of Carthage, and inasmuch as the city as reconstructed by M. Aucler was not in existence in Plato's day, it is reasonable to infer that the Carthage of Roman times was built according to a town-planning scheme traditional on the African coast. Every archæologist is aware, adds

¹ p. 17.

Mr. Spence, that the island-within-an-island plan characteristic of the two cities is the same as that of the prehistoric island-forts of Britain, whose Mediterranean origin is indisputable.¹

THE GEOLOGICAL RECORD.

Geology however must have the first say in a question of this kind, although the opinions held by professors of that science are not always trustworthy. The older geologists were not averse to the idea of bygone cataclysmic changes in the disposition of the continents. But Victorian materialism produced a reaction in favour of the inertia then regarded as the sole reality, and motion of any kind in the established order of immobilities was regarded as an impertinence. A corresponding dislike was felt to the idea that this solid earth of ours could at any time have been the scene of violent reconstruction, and when a coincidence was discovered between the mass of the moon and the two great oceanic basins in the southern hemisphere, it was seized upon forthwith as proof conclusive of the immutability of our continents. The basins of the Atlantic and the Pacific were supposed to be the cavities left behind when the moon was reft from her parent planet, whose surface was thereafter consolidated into its present form and save for a few insignificant changes had so endured since the beginning of all things. It was idle therefore to talk of vanished continents; Lemuria was a dream and Atlantis a superstition. Even when the mathematician took up the tale and Lord Kelvin proved that a moon so derived ought now to be revolving about us almost within speaking distance, the geologist was unconvinced, and indeed expressed his open distrust of an argument whose force he was incapable of appreciating.² Not with im-

¹ p. 18.

² See for example Suess, *The Face of the Earth*, iv. 601.

punity does man bury his talent in the earth. But the prejudice in favour of inertia gradually disappeared. Biologists and anthropologists made their voices heard, the sister science recanted her error, and the geologist has now acknowledged his reconversion to the old belief in cataclysmic changes. To salve his *amour propre*, however, he prefers to speak of major readjustments of the earth's surface, and these are thought to have divided the great geological epochs one from another.¹

The cause of Atlantis has been greatly benefited by the removal of this superfluous obstacle, and, if we may trust Mr. Spence, the majority of geologists are now prepared to recognize a pre-existent land connexion between Africa and South America. Professor J. W. Gregory, Sir William Dawson, Professor R. F. Scharff, and other leading authorities join with M. Pierre Termier, Director of Science of the Geological Chart of France, in regarding the connexion as a fact of the Eocene Age. The intervening land retained its continental character till the early Miocene, when it began to break up into insular masses. There are indications pointing to the formation of two great islands, one off the Gulf of Mexico and the other near the Straits of Gibraltar, now surviving in the West Indies and the Atlantic islands respectively. These persisted until late Pleistocene times, or say 25,000 years ago, when they experienced further disintegration. Final disaster seems to have overtaken Atlantis about 10,000 B. C., but Antilia endured until a much later period.

¹ Yale University, *Evolution of the Earth and its Inhabitants*, 71; *Discovery*, Aug., 1924, and the authorities quoted by Mr. Spence, at pp. 23-45 and 204-5. Since the above appeared in print, news has arrived of an immense upheaval in the Atlantic off the coast of Spain, where the sea-bed is stated to have risen more than 2 miles vertically, and of a "land-wave" in the Pacific which is expected eventually to add many thousand square miles to Hawaii.

Geologically therefore there is a good case for Plato's Atlantis, and it may be added that the objections raised by Wallace and others were largely based on erroneous information. It is even more significant that the white, black, and red rocks of which Atlantis is said to have been built exactly correspond with the geology of the site ascribed to the city. According to M. Termier, that part of the Atlantic bed is composed of whitish calcareous terranes together with black and red lava-flows from extinct volcanic mountains.¹ The confirmatory value of this evidence is manifestly great, for Plato could hardly have guessed at the composition of the strata underlying the eastern Atlantic. Coupled with the similarity between Atlantis as described by Critias and the Carthage of Roman times, it raises a strong presumption in favour of the tradition.

ANIMAL LIFE.

THE biological evidence next demands attention, but the smallness of the Atlantic islands and their proximity to the coasts of Europe and Africa limit its extent. There are molluscs peculiar to the shores of the West Indies and Senegal which in M. Termier's opinion show that those countries were once united by land. Sixty per cent of the butterflies and moths found in the Canaries are of Mediterranean origin, and twenty per cent of these occur in America. The identity of the earth-worm of the islands with that of Europe and North Africa is proof positive of a previous land connexion between those regions.² Mr. Spence is therefore justified in saying that the evidence from animal life points to an early continuity of land between Europe, Africa, and America, but he omits to notice that his argument receives sup-

¹ p. 19.

² ch. iv.

port from the remarkable flora of St. Helena, which exhibits both African and South American affinities.¹ Reference is made however to the singular habits of the lemming, a little Norwegian rodent afflicted at times by a suicidal mania which leads it to enter the sea in large numbers and swim westwards till all are drowned. As the late W. D. Crotch suggested, it is not improbable that this habit is a survival from the days when the little creature was accustomed to migrate to some land now sunk beneath the ocean. Similarly, adds Mr. Spence, "it is well known that large flocks of birds annually fly to a part of the Atlantic where no land is now visible, and after fluttering about in dismay for some considerable time, fall exhausted into the water."² It is a strange example of the reluctance of instinct to profit by experience.

Thus there is good reason to believe that a great continent united Africa and South America (as well as Europe and North America) in Tertiary times, and that isolated fragments of this huge land mass persisted until some eight or ten thousand years before our era. "There are striking resemblances in structure between Equatorial Africa and Brazil," writes Professor J. W. Gregory; "the intermediate basin of the Atlantic has probably been formed by the foundering of the plateau land which once connected South America and Africa."³ Sir William Dawson adds that the great Pleistocene submergences of America and Europe came to an end not more than ten thousand years ago, and Plato's dating as well as his tradition thus receives ample scientific support.

¹ *Enc. Brit.* xxiv. 7.

² p. 56.

³ Quoted, p. 32. The biological and structural resemblances are so numerous that M. Wegener has lately propounded the theory that Africa and South America are the dis severed halves of an originally continuous land-mass.

3.

Mr. Spence next turns to evidence of a different order. Anthropological research has proved that at an epoch universally dated at about 25,000 years ago the then Neanderthalian inhabitants of Europe were displaced by invaders of a much higher rank. Neanderthal man was of a low plantigrade type, with relatively small cranial capacity, and although he believed in the survival of the dead and could make rough stone tools, he was more ape-like than any extant savage. But the new-comers were a splendid people. Exceeding six feet in height, the men were broad-shouldered and short-armed—an indication of high evolutionary development—while the skull-content even of the women surpassed that of the average man of to-day. These were the Cro-Magnons or Aurignacians. Mentally and physically, says Sir Arthur Keith, the race was one of the finest the world has ever seen. In art and industry they were far superior to anything known on earth prior to their appearance, and it has even been doubted whether any modern country has produced their equals.

A GIFTED RACE.

Whence did the Cro-Magnons reach Europe? Their culture is first seen in south-western France, where it persisted for many thousand years before it was destroyed. Remains of Aurignacian industry are distributed about the entire periphery of the Mediterranean, but in its earlier phases it is found only in the region of Dordogne and the Pyrenees, and such relics as it has left in Central and Eastern Europe are not only inferior but of far later date. The Abbé Breuil—the first living authority on the subject—infers that successive invasions of the culture took place either from the Mediterranean, or from the Biscayan coasts of France and Spain, and Professor H. F.

Osborn is of the same opinion. But nothing is said as to the origin of this magnificent race, and as Mr. Spence remarks, an art such as the Aurignacian is not to be developed within a few decades. "Here is a masterly perfection to which the art of Egypt is as the angular scratchings of a child with slate and pencil. The race who carved and painted so wonderfully possessed a highly-strung æsthetic sense, a cultivated taste, a sure touch,"¹ and the creations they have bequeathed to us must have had a history of many thousand years behind them. Where was their art developed?

Cro-Magnon man did not come from the east or north, nor can it help matters to derive him from western Africa, for that again throws us back upon the Atlantic for his original home. Without exception, moreover, the Aurignacian stations hitherto discovered in south-western Europe are situated in the Biscayan district, and the fact is inconsistent with an African provenance. All the evidence therefore points to the entrance of the newcomers from the Atlantic sea-board. Further light is thrown upon the problem by the Guanche aborigines of the Canary Islands. Many anthropologists regard this people as related to the Cro-Magnons, with whom they have various physical traits in common. According to Lord Abercromby, described by Mr. Spence as a trustworthy authority on all archæological matters, the Guanches are made up of at least three stocks—a Cro-Magnon type, a Hamitic or Berber type, and a brachycephalic type.² Like the Cro-Magnons they were cave-dwellers and were given to decorating the interior of their abodes with paintings. These do not compare with the artistry of Dordogne, but long isolation must inevitably have led to degeneration in the islanders. In any case, where did the Guanches come from?

¹ p. 62.

² p. 65.

It is difficult to suppose that they reached the Canaries by sea from Africa, even if such an origin consisted with the non-African elements in their physique. We must go further afield to find their relatives. Professor J. L. Myres tells us that a similarity has been noticed between the Aurignacian skulls of Europe and the prehistoric skulls discovered at Lagoa Santa and elsewhere in Brazil, pointing once again to an ancient land-connexion between Europe, Africa, and South America, by way of the Canaries.¹ Finally, there is the peculiar language spoken by the Basques, a people of the Pyrenees. As in the case of Easter Island, Madagascar, and Tiahuanaca, Nature seems to have taken care amid all her cataclysms to leave sign-posts pointing towards the solution of her mysteries. The affinities of the Basque roots, writes Dr. Farrar, have not been finally elucidated, but "there has never been any doubt that this isolated language, preserving its identity in a western corner of Europe between two mighty kingdoms, resembles in its grammatical structure the aboriginal languages of the vast opposite continent and those alone."² The opposite continent was not unknown to Plato.

FACT AND INFERENCE.

Like other men of science, anthropologists are notoriously reluctant to reason from any facts except such as are capable of admeasurement or chemical analysis, and the origin of Cro-Magnon man is accordingly relegated to the realms of the unknowable. But not many facts worth counting in human life submit themselves to the micrometer or the test-tube, and those whose conception of evidence is less eclectic will find it hard to reject an inevitable inference merely because it is guaranteed by the reason instead of the senses.

¹ p. 67.

² Quoted, *ibid.*

With Mr. Spence then we may conclude that Cro-Magnon man was "the first of those immigrant waves which surged into Europe as the great continent in the Atlantic experienced cataclysm after cataclysm, partial submergence or violent upheaval. These catastrophes forced him eastward over a still existing land-connexion into northern Spain and southern France,"¹ and the beautiful paintings and carving of Dordogne were the product of his genius. Mr. Spence goes on to trace the renascence of Aurignacian art in the Magdalenian and Azilian eras, arguing that the evidence points to successive waves of immigration from Atlantis from about B. C. 16,000 to 10,000. The argument need not be detailed here, but we may endorse Mr. Spence's caution against the tendency to identify the so-called stone cultures with a savage or even barbaric state of society. Iron was equally unknown to the Lemurians who carved and drilled great blocks of basalt and the Egyptians who fashioned their monuments and scooped their sarcophagi out of the not less stubborn granite; in both cases with a facility beyond the power of our finest modern tools. These works were accomplished by highly organized communities familiar with the art of writing and certainly not less proficient than ourselves in the mechanical arts. We have no right to assume that their civilization was one whit inferior to our own.

4.

Thus far there is little to dissent from in Mr. Spence's reasoning. The facts are well authenticated, the inferences legitimate, the requirements of moderation and common sense observed. But when it turns to popular fable the argument becomes less convincing. Like many other races the aborigines of America have preserved tradi-

¹ p. 68.

tions of the destruction of mankind by tremendous cataclysms and the repopling of the earth by the descendants of some favoured survivors. But greater and lesser catastrophes of this kind have not been infrequent in human experience—indeed, the last of them seems to have occurred hardly a couple of centuries ago, when Hotu Manua and his followers took refuge on Easter Island—and it is impossible to identify the traditions with the major readjustments of a given epoch. No doubt, the Deluge myths of western Europe and eastern America refer to one phase or another in the long drawn-out tragedy of Atlantis, and as such they have their probative value. But Mr. Spence says all that is necessary in the remark that “an ancient and widespread tradition existed on the western coasts of Europe regarding the former presence of insular masses of considerable size in the Atlantic,” and that the destruction of lands to the east of them is recorded in the legends of many American peoples.

SPLENDID TEMPLES.

Little therefore need be said as to the mythological part of the argument, but the reader will find much interesting information, not easily available elsewhere, in the chapter describing recent progress in the decipherment of Central American hieroglyphics. A few words from the conclusion of this chapter deserve quotation. The statues and stelæ which meet the eye in the depths of the Guatemalan forests, writes Mr. Spence, are not the work of a race newly sprung from barbarism.

“Indeed, they display all the marks of an ancient and almost decadent civilization, a culture old and in its decline. Search for its beginnings as we may on American soil, and we shall not find them there. These gorgeous temples and extraordinary statues, with all their bewildering detail of ornament and an art which has not its equal in

the world for subtlety of expression or involved richness, must have had behind them not centuries but thousands of years of effort before such summits of achievement could possibly have been reached."¹

But it has not occurred to Mr. Spence that an art divided by so enormous a chasm as that which lies between the incredible grotesqueries of the Mayas and the exquisite creations of the Cro-Magnons must be separated by whole geological epochs if they be sprung from a common origin. So great indeed is the contrast between the grinning monstrosities of the one and the refined delicacies of the other that it is less difficult to ascribe them to alien and widely differing civilizations. The scripts and images of Central America are far more nearly akin to those of Easter Island than to the paintings and statuary of Dordogne. If then Aurignacian art came from Atlantis, may not the Maya sculptures be a bequest from Lemuria?

THE IBERIANS.

But Mr. Spence's hands are full enough with developing his own theory, and he takes us next into regions of unusual interest. According to Plato, Atlantis was overwhelmed about 10,000 years before our era. The same date is assigned by geologists to the close of the Pleistocene submergences, and by anthropologists to the appearance of the third or Azilian-Tardenoisian phase of Aurignacian art in Europe. The triple coincidence of date cannot be fortuitous, and it would tax incredulity itself to deny an almost certain connexion between the foundering of an island empire and the simultaneous appearance of a new type of art on the neighbouring mainland. Now Mr. Spence suggests that the Azilian refugees from Atlantis were the direct ancestors of the Iberians,² and there is much to support the

¹ p. 139.

² pp. 76 f.

hypothesis. Anthropologists agree that the Iberians, otherwise known as the Eurafrican or Mediterranean race, were at one time in possession of Aquitania, Spain, Corsica, part of Northern Africa, and the Canary Islands. Those are just the regions that would be covered by an immigration from Atlantis, and the Guanches, as we know, are partly of Cro-Magnon stock. Further, the Iberians were known to the Romans as Atlanteans, their name is supposed to be derived from the Basque *ibay erri*, "country of the river," and it is well established that both they and the Azilians were a people of maritime proclivities. These facts go far to prove that whether descended from the Azilians or not, the Iberians were emigrants from Atlantis.

But the influence of these pioneers of Neolithic culture spread far beyond the Aurignacian area. They penetrated to Britain and Norway on the north and to Egypt and her dependencies on the east. "So striking," writes Professor Elliot Smith, "is the family likeness between the early Neolithic people of the British Isles and the Mediterranean, and the bulk of the populations, both ancient and modern, of Egypt and East Africa, that a description of the bones of an early Briton of that remote epoch might apply in all essential details to an inhabitant of Somaliland."¹ Other authorities are quoted in support of the statement, and the fact emerges clearly that in both prehistoric and historic times Egypt was profoundly influenced by Iberian or Atlantean culture. It is reasonable therefore to derive Egyptian civilization, at least in part, from the Atlanteans.

5.

Justice cannot be done to the succeeding argument without undue prolixity, and many im-

¹ Quoted, p. 74.

portant details must be omitted from our summary. The leading feature of Egyptian civilization in and preceding the dynastic period was the introduction of the Osiris cult together with its characteristic practice of mummification.¹ The predynastic Egyptians buried their dead with the face towards the west, and the earlier mummies were painted red in order (as it thought) to give them a semblance of life. Iberian man also buried his dead facing the west, and his Aurignacian predecessors smeared the bodies with red oxide of iron. Both in Egypt and in Aurignacian Europe it was the custom to bury shells and amulets with the corpse. Further, mummification was practised not only by the Guanches but in Mexico (where it was certainly not indigenous) and Peru, the process employed in the latter country being described as virtually identical with the Egyptian. In Central America as in Egypt the viscera were preserved in Canopic jars, whose lids bore images of various deities, and the four cardinal points, together with certain colours, were associated with the lungs, intestines, and other parts of the abdomen. These striking resemblances point to an identity of origin for the Egyptian and American customs, and as Mr. Spence observes, it is much more probable that both were derived from a common centre lying midway between the two countries than that the practice should have travelled eastward from Egypt through Asia and across the Pacific Ocean.

THE BOOK OF THE DEAD.

The practice of mummification being closely associated with the worship of Osiris, it should follow that if the one was of Atlantean derivation, so also must be the other. But Mr. Spence relies on direct evidence to prove his case in regard to the Egyptian God. To criticize his treatment of

¹ pp. 154—163.

this part of the evidence calls for an archæological knowledge to which the writer cannot pretend, and it must suffice to summarize the arguments.¹ Osiris, it appears, was not a native of Egypt but made his way into the country as mysteriously as Iacchus thousands of years later made his way into Greece. His home and origin, says Sir E. A. Budge, were "possibly Libyan." Our clearest knowledge of the God is derived from the Book of the Dead, a work at least as old as Egyptian civilization. Its contents had become largely unintelligible to the priesthood by 3300 B. C., while a later inscription which speaks of the rediscovery of a missing chapter nearly two thousand years before shews that even in 4266 B.C. the book had grown archaic. Mr. Spence, who has made a special study of American antiquities, assures us that it bears a close resemblance to the Popol Vuh, called by some the Mexican Book of the Dead.

"In its pages the corpse is depicted as dressed for burial, the soul, like the Egyptian Ba, escaping from the mouth. The spirit is ushered into the presence of the God Tetzeatlipoca, just as the Egyptian ghost is brought before Osiris, by a priest dressed in an ocelot-skin (the Egyptian high priest is dressed in a leopard-skin), and stands naked with a wooden yoke round his neck to receive sentence. He is then given over to the tests which precede entrance to the abode of the dead, precisely as was the Egyptian defunct."²

These and other coincidences between the two books point clearly to their common origin.

GODS AND PYRAMIDS.

Similar resemblances are found in the Mexican pantheon, which Mr. Spence describes as the shadow of the Egyptian.³ One pair of examples out of half a dozen must suffice. Set the Opposer was God of night, of cold, darkness, and death.

¹ pp. 150 f.

² p. 172.

³ pp 175—178.

author of storms, eclipses, and earthquakes. Though blood-brother of Osiris, he was his mortal foe; the Great Bear was his constellation, and his hieroglyph a stone. All these characteristics reappear in Tetzcatlipoca the Great Enemy, hater of his brother the Sun-god Uitzilopochtli. Both Gods were painted black, both were malignant, and more remarkably still, the Egyptian deity was represented with the head of some unknown animal, while in certain manuscripts Tetzcatlipoca is symbolized "by the head of an animal unknown in Mexico, which is identical with that which represents Set." If Mr. Spence's facts are correct, the proof of identity is conclusive, though it must be observed that to the outer eye no two deities could be less alike than Set and Tetzcatlipoca as depicted by their respective worshippers. After this, it is hardly worth while to dwell on the similarity between the Egyptian and the American pyramids, the chief difference being that the external steps or terraces were filled in and smoothed over in the one case and left exposed in the other. Not all the American pyramids were oblong and truncated; two specimens found near Palenque are square at the base and pointed at the top, their sides forming equilateral triangles. The interior galleries of the pyramid at Teotihuacan, adds Mr. Spence, are almost precisely the same as those of the pyramid of Cheops.¹ Taken in conjunction with the other evidence, these facts prove his case like a sum in simple addition.

KING ARTHUR.

But what are we to say when Mr. Spence asks us to recognize Osiris in our British hero King Arthur? Space does not permit us to review the correspondences between the beliefs of Egypt and

¹ p. 179.

those of western Europe, but they are numerous.¹ According to the distinguished Belgian archaeologist Siret, Druidism was a religion brought into Iberia from Egypt or Syria, and Mr. Spence merely reverses the process of importation. It was the Iberians, he argues, who took Druidism or Pythagoreanism into the eastern Mediterranean, the belief in metempsychosis, for example, being prevalent throughout Gaul and Britain, but found in Egypt only in association with the Osiris cult. Similarly, the King Arthur legend is widely diffused over the lands once occupied by the Iberians, and examination discloses the following remarkable coincidences between the myth of the Egyptian God and that of the British hero. Both are slain by a treacherous kinsman—Osiris by his brother Set, Arthur by his nephew Mordred. Both are carried off in a barque by their lamenting sisters to an island in the west—Osiris to Aalu, Arthur to Avalon. Aalu is a land of plenteous fruits, Avalon the Place of Apples, and Osiris remains in Aalu as ruler over those who await a glorious resurrection, while Arthur dwells in Avalon in a state of suspended animation, in expectation of the day when Britain shall again require his aid. Avalon, says Mr. Spence, is Aalu and Arthur Asar or Osiris, adding the final corroboration by this resemblance between the names. Osirians and Druids both believed that Osiris (as Horus) and Arthur or one of his knights daily fought with a great dragon living in the ocean. The legend of the Grail is said to teem with Oriental references, many of the place-names in the story having been identified with actual localities in Egypt. Finally, the Atlantean cult of the bull, mentioned by Plato, reappears in the Egyptian Apis and in the Druidical practice of cattle sacrifice in the rite of Beltane, and survives to this hour in the Iberian or Spanish bullfight.

¹ pp. 158—161.

6.

Many important details have been omitted from our review, but it is evident that the case for Atlantis rests on a solid basis. Plato's tradition is supported by geology and anthropology, his dating receiving remarkable support from both sciences. The city as he describes it resembles Carthage and other "Mediterranean" island-forts; the materials of which it was built were those of the rock-formations beneath the eastern Atlantic. The sudden appearance of a highly evolved humanity in south-western Europe, occupied till then by men of the lowest bestial type, compels us to regard the newcomers as emigrants from a land lying further to the west, and their artistic proficiency proves them to have issued from no savage or barbarous society. Racial and linguistic affinities between certain south-western Europeans, the Canary Islanders, and extinct or extant peoples on the American sea-board indicate that the continent which once stretched across the southern Atlantic was inhabited by men of kindred stock. Tradition confirms an inference which is further reinforced by the appearance of similar architectural designs and funerary customs on both sides of the Atlantic. Finally, we have it on Mr. Spence's authority that the Mexican pantheon is a shadow of the Egyptian, that the eschatology of the Popol Vuh closely resembles that of the Book of the Dead, and that the passage of the Osiris cult from Atlantis to Egypt can be traced by the remains it left behind in Druidic and other early western beliefs.

ÆGEAN CIVILIZATION.

Mr. Spence makes no reference to the early Cretan civilization, nor can we say whether the omission is intentional. Recent discoveries in the Ægean however may be thought to strengthen the argument for Atlantis. A race of skilled

navigators compelled to seek a foothold on foreign soil by the submergence of their homeland would colonize any suitable island lying in the path of its migration, and Crete as well as Corsica would have offered a welcome refuge to the Atlanteans. Scattered abroad by the destruction of their homes and reduced to beggary by the loss of their resources, the exiles would be hard put to it to keep soul and body together, and their near descendants would relapse into a state of savagery. Plato has drawn a vivid picture of their destitution.¹ If however the new country of settlement afforded the necessary facilities, innate capacity would presently reassert itself, and in the course of time we should expect to see the race restored to its proper cultural level. It is at least significant then that the beginnings of Cretan civilization, a culture in some respects superior to that of Egypt, should be traced to that same date, B.C. 10,000, which the geologist assigns to the close of the Pleistocene submergences, the anthropologist to the arrival of the Azilian-Tardenoisians in Europe, and Plato to the disappearance of Atlantis.² Nothing is said as to the racial affinities of the early Knossians, but the still brilliant frescoes of the Corridor of the Procession depict a finely moulded people, dark reddish brown in colour, and with features in no way Semitic but rather approximating to the classic Greek type.³ In two important respects this people resembled the Azilians—they were expert seamen, and in artistic taste and skill they were surpassed by none but the later Greeks.⁴ Southern France is not so far distant from the Aegean as to preclude the idea of a common

¹ *Supra*, p. 25.

² See J. Baikie, *Life in the Ancient East*, 399, as regards Crete.

³ *Ibid.* 375.

⁴ *Ibid.* 388. The Cretans were familiar with the art of writing.

ancestry for the painters and sculptors of Knossos and those of Dordogne, and the further fact may be added that like the Atlanteans, Iberians, and Celts, the Cretans held the bull in special reverence. Indeed, it seems less unnatural to suppose that the contemporaneous cultures of Crete, Egypt, and the Pyrenees, possibly also that of Mycenæ, all drew their inspiration from a common centre than to attribute them to simultaneous but independent development in their respective countries. The six or seven thousand years that elapsed before the Ægean and Egyptian civilizations reached their zenith, together with the widely differing environments in which they were nurtured, would account for their divergencies from the parent type, while as for the Pyrenean branch, transplantation to a less congenial soil would explain its early disappearance.

7.

Scientific theories of cultural origins have lately undergone a complete reversal—a change from polygeny to monogeny comparable with the chemist's recent conversion from polymaterialism to monomaterialism. The revolution has been brought about by the undeniable identities between Egyptian, American, and other ancient cultures, which it is no longer found possible to ascribe to the necessity once supposed to restrict all primitive minds to the same modes of expression. The belief has been found incompatible with the facts, and just as the physicist has returned to alchemy, the ethnologist has reverted to the syncretist doctrine that the world-wide coincidence in creeds and ceremonies is proof of their common origin. But as the cultures are in the main religious, their source must needs be looked for in early superstition, and Egypt of the mummy period is regarded as their author. On this shew-

ing, nothing worthy to be called religion or civilization was known on earth till about three thousand years before our era, when the Egyptians conceived the idea of securing immortality by means of preserving the dead body. Allegorical, symbolical, and magical complexes followed, and religion as we now understand it came to the birth. The cult met with signal success, and was carried throughout the world by Phœnician traders seeking gold, silver, and other commodities in distant countries. It travelled westward to the Guanches, eastward to Papua, and eventually made its way across the Pacific to Mexico and Peru. It is not proposed here to criticize a theory whose frailties are evident on inspection, though surprise may be expressed that a modern anthropologist whose estimate of man's antiquity is doubtless measurable in geological epochs should have redescended to conceptions which even Archbishop Usher would have despised. Most educated men will regard civilization no less than culture as specific to man, but since Professor Elliot Smith looks upon it as an accidental stumbling-block in the path of human evolution,¹ it is not unnatural that he should favour this infra-parochial notion of its origin. Mr. Spence's arguments have yet to be answered, but in the meanwhile, inasmuch 'as the article on Anthropology in the latest (12th) edition of the *Encyclopædia Britannica* has been contributed by Professor Elliot Smith, it must be presumed that he has silenced his other opponents and that the Egypto-mummy theory of civilization has prevailed.

A DEVASTATING EXPOSURE.

The article will repay study. Only eleven years before the date of its appearance the encyclopædist had announced that "it is now certain" that the *soi-disant* evolutionary theory of

¹ *Supra* p. 45.

cultural development was true. Every authority from Fontanelle to Sir J. G. Frazer had proclaimed it, and the whole science of Comparative Religion has been built upon this foundation. But Professor Elliot Smith is the prophet of a new dispensation. He quotes the passage from the *Encyclopædia* of 1911 *in extenso*, and treats it with vitriolic scorn. That which was "now certain" in 1911 is a "weird speculation" in 1925. The theory is said to conflict with the facts of history and the principles of psychology. "With curious lack of knowledge and logic the ethnologists called it 'evolution,' " thus paralyzing the study of ethnology and removing it from the sphere of serious discussion; and so forth, to the equal edification and amusement of the unbeliever.¹ But Professor Elliot Smith has set a dangerous precedent. He may rest assured that his own speculations will meet with the same contemptuous treatment a few years hence, for indeed—and Mr. Spence's arguments quite apart—they are even more easily turned to ridicule than the "evolutionary" theory. Meanwhile, this ruthless exposure of scientific folly should teach the public how utterly devoid of value are all these ignorant guesses as to the course of human evolution.

8.

It is the misfortune of all good causes that they suffer as much from the enthusiasm of their friends as the enmity of their foes, nor is it easy to say which is the deadlier. Had the friends of Atlantis let things alone until the ground had been properly surveyed, they would have built on surer foundations, and the Abbé Brasseur de Bourbourg and Dr. Augustus le Plongeon would have avoided their many absurdities. Ignatius Donnelly, a less incautious inquirer, could make no headway

¹ The weird speculation is denounced in yet more scathing terms by the same writer in *Primitive Man*, 33 f.

against the prejudice aroused by his predecessors, and even he was not exempt from follies of his own. Save us from our friends, says the proverb. The case for Atlantis was ruined by the unwisdom of its advocates, nor could it hope to obtain a fresh hearing until the generation which rejected it had passed away.

PROCRUSTES.

On the other side, the evidence was equally misconstrued by learned ignorance. So long as geology insisted on the immutability of the earth's surface, it was useless to talk of vanished continents. This difficulty has now been cleared away, but a greater obstacle remains to be overcome. It follows of necessity from the current theory of human origins that the more bestial types of fossil man are older than the more advanced types, so that any evidence associating higher man with early geological or biological forms has to encounter an almost irresistible prejudice. It needed thirty years to convert the savants to a belief in Palaeolithic man, but even when the Aurignacian was proved to be contemporary with the debased Neanderthalian, the anthropologist maintained his ground and merely set back the separation of man from the anthropoids by a few hundred thousand years. Every new discovery is still distorted by the prejudice. When artefacts are found lying beneath mid-Pliocene strata, the inference is drawn, not that man was in existence at that epoch, but that the strata are not mid-Pliocene. When fossils are found pointing to the existence in America of an Eocene humanity, the evidence is dismissed offhand because such an antiquity would imply a man antedating the Javan Pithecanthropus, while the tools and weapons associated with the remains "cannot possibly be" assigned to so remote an era. So far from inferring his theory from the facts, the anthropologist as-

sumes his theory and forces the facts into compliance with it.¹ Procrustes, not Bacon, is his mentor. Some genius may presently arise in whom a mastery of the sciences will be united with a constructive imagination, and who will reduce confusion to order by turning the facts the right way round. But meanwhile the animalistic philosophy holds the field, and psychology as well as experience forbids us to look for any understanding of the evidence during the lifetime of the present generation.

Nevertheless, the anthropologist should be more careful of his premises. What becomes of the Egypto-mummy theory if Atlantis was a fact, to say nothing of Lemuria? If it is only a few thousand years since Atlantis was swallowed up, there is no escaping the presumption that the great island had its human occupants. As for Lemuria, Sir Arthur Keith's well-founded opinion that the several races of mankind have all been evolved in or near the territories they now inhabit requires us to regard the Polynesians as descended from the tenants of that long-forgotten land. But Professor Elliot Smith lays down his "it is now certainties" in blissful oblivion whether of earthly cataclysms or of major readjustments in geological doctrine. It will not be long before his own speculations disappear for ever in one of these catastrophes.

THE GREY SISTERS.

Nothing is so fatal to progress, says Heraclitus, as false opinion of progress, and the maxim is well illustrated in the recent history of thought. Geology led the way to error by under-estimating the

¹ As these pages are going to press, word arrives of the excavations in Florida carried out by Dr. T. W. Gidley and Professor F. B. Loomis, who have discovered human remains there in association with bones of the mammoth and the mastodon. The customary inference is drawn, not that American man is more ancient than was supposed, but that the extinct animals are more modern!

age of the earth by several thousand million years, and then destroyed all hope of making our evolution intelligible by declaring that the disposition of the continents had remained unchanged throughout the ages. Conforming with the dogma and dominated by equally barbarous conceptions, anthropology searched for man's birthplace in regions which never came into existence till millions of years after his creation. Materialistic notions led the Darwinian to trace man's ancestry to his bastard descendants and derive his civilization from the non-civilizable savage, while the churches, no less materialist at heart, succumbed to literalism and hastened to abjure their scriptures. The results are seen in the chaos of educated thought to-day. Nothing is explained, nothing co-ordinated. Doctrines held sacred by one generation are barbarous superstitions to the next, the proven truths of to-day become the falsehoods of to-morrow, the scientific certainties of 1911 are weird speculations in 1925, while sciences, philosophies, and religions are all at variance between themselves, no two of them agreeing in premises or conclusions. Now the Greeks had a fable of three ancient dames who dwelt in a land of ice and snow amid eternal darkness. Having but one eye and one tooth between them, they could neither see nor chew anything effectively or simultaneously, but each had her separate purblind vision and each her feeble independent digestion. An adventurous youth forced their secret from the Grey Sisters by intercepting the eye as they passed it one to another, thus reducing them to total blindness; and when he had learnt all that they could teach him, he invoked the aid of Hermes and Athena and slew the monster whose baleful gaze turned everything to stone. Even the materialist whose philosophy turns everything to stone may read the parable; but where is the modern Perseus?

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ON THE METHOD OF PRACTISING CONCENTRATION AND CONTEMPLATION

CHI KI (CHIK I)

A MONK OF SHUZENJI (HSIUTANSZU) MONASTERY
OF TENDAI (TIENT'AI) MOUNTAIN

Translated by KAKUSO OKAKURA

with a Prefatory Note by

WILLIAM STURGIS BIGELOW

KAKUSO OKAKURA died in Japan September 2, 1913. He was an "Admirable Crichton" in his way, a man of vast learning, which covered both sides of the world. He was graduated from the Tokio University in 1880 with honors in philosophy and English literature, to which he might have added honors in Oriental philosophy and literature had not the drift of education in Japan at that time been all in the direction of the Occident. He always kept in close touch with the Occidental world, and was for ten years the head of the Department of Chinese and Japanese Art at the Boston Museum of Fine Arts.

Okakura was the greatest scholar and most original writer of modern times on Oriental art. But this was far from being his only interest; his mind was encyclopaedic. It seemed impossible to ask him a question which he could not answer, not only in regard to art and poetry, but in regard to history or philosophy or religion in Japan, China, or India. He was a great traveller. He had been around the world repeatedly. He had been in China many times and travelled all over that country. He spent nearly two years in India, with which he was equally familiar, notably in respect to art, religion, and philosophy. His grasp of our Western literature and fine arts was extraordinary. I always enjoyed going with him to see pictures or hear music. His appreciation was keen. He liked Raphael and

detested Rubens. After a Beethoven symphony at one of our concerts here, he said to me, "Ah! This is the only art in which the West has gone farther than the East." On the other hand, I remember his characterizing a modern comic opera, with its loud orchestra and chorus, and its stage crowded with tinsel and color, as an "iridescent nightmare." When I showed him some photographs from the Cubist exhibition, he looked them over slowly, one by one, and then said, as he handed them back, "I stretch out my mind toward them; I can touch nothing." He was past-master in those refinements of Japanese civilization which are part of the education of a gentleman, in writing poetry and arranging flowers, in the formal tea-ceremony and jiu-jitsu. All these were facets of the many-sided character which the world knew; but what the world did not know was his intimate relation with the Buddhist church. His familiarity with its history and philosophy was wide and thorough; he had received the sacraments of the Tendai and Shingon sects, and had practised for some thirty years the so-called "Interior System," the system which deals with states of consciousness reached through the will and not through the senses. Of this system the document which is here presented is the foundation. It was written by Chisho Daishi (St. Chisho), a Chinese monk who came to Japan in the ninth century and founded there a Buddhist sect, which he named Tendai after the mountain on which stood the monastery from which he came. There were two of these monks. The other was Kobo Daishi, the founder of the Shingon sect in Japan. Both sects exist and flourish today, a thousand years later.

It is interesting to note that although these priests of the ninth century were companions and close friends — a relation maintained by the head priests of the two sects to this day — and although the ritual is practically identical in both sects, nevertheless the Shingon is *Shojo* ("Lesser Vehicle"), while the Tendai is *Daijo* ("Greater Vehicle"). These systems are supposed to be opposite and contradictory, but when the head of the Tendai, Okakura's first teacher, died, he referred his pupil to the head of the Shingon to continue his studies.

The present document has never before, so far as I know, been

translated into any Western language. Okakura's translation is given substantially as he left it. It embodies complete and detailed directions for reaching or acquiring the state of consciousness called Samaji, for which there is no word in English except 'ecstasy,' and this only in its etymological sense, of 'a state outside of the body,' that condition of consciousness in which the sense of personal identity is preserved and the will is in a condition of free activity, while at the same time the ordinary relations with the material universe through the five senses are cut off."

"Broadly speaking, in the East men have studied themselves; in the West, what is outside themselves -- that is to say, the material world, including their own physical bodies. Both in the East and West men have recognized the fact that there is an inside and an outside, and have tended to state the part of the subject which they were not studying in terms of the part which they were. In the West the tendency has been to regard the body as the man, and the phenomena of consciousness as a somewhat irregular and unclassifiable by-product, the most definite statement about it being that made thirty or forty years ago that the brain secretes consciousness as the liver secretes bile. Just now we speak of consciousness as an epiphenomenon or parallel phenomenon. The latter term is perhaps the better, for the sensory consciousness of an object is parallel with the object in the same sense as the reflection in a mirror. In the East, on the other hand, they say that the organism *is* consciousness, and that the physical body is only an item in the total of that consciousness, and a small one at that; that it is a small fragment of matter, of the existence of which consciousness takes cognizance as it does of any other portion of matter, from a pebble to a fixed star, or the receiver and transmitter of a telephone. As it is understood in the East, therefore, the study of self is the study of consciousness. There as here this study is systematic and scientific, but it differs in name on the two sides of the world. In the West it is called psychology. In the East it is called religion."

The forms of consciousness are classified in the East in various ways for various purposes. The classification which con-

cerns us in connection with this document is a division into two parts of very unequal size, the one actual and very small, the other latent and indefinitely great. We might call them by the terms applied to energy by Tyndall, dynamic and potential, or by the terms of modern psychology, the conscious and the subconscious. The division is basic and fundamental in the East, and is the starting point for the study of nature as they study it. In the West we rank organisms by the complexity of their physical structure. In the East they rank them by the complexity of their consciousness. This generalization is true both in the comparison of contemporaneous organisms and in the process of evolution. In the lower forms of organic life, that is, organisms lower than man, evolution affects preponderantly the material part of the organism and thereby the psychical part. The organism in its advance is guided by its environment along a strait and narrow path, a misstep on one side or the other of which involves prompt extermination. As long as evolution is acting in this way on the material body of the organism through the material environment, the advances made are mainly in perfection of material structure. The psychical advances are relatively trifling in extent and variety. The intellect of the lower animals is much the same. It is concentrated on the three points of safety, nutrition, and reproduction, under penalty of death. But with man the case is different. To a large extent he creates his own environment and thus determines the conditions of his own evolution. He is no longer passive to nature as he finds it. It is nature that is now passive in relation to him, and he reconstructs it to suit himself, and then attempts to live up to the conditions which he himself has created. His survival depends mainly not on how he deals with the environment he finds, but on what sort of environment he constructs.

Man, then, in the Eastern view, consists of consciousness, and in consequence the difference between one man and another necessarily consists in the extent or quality of that consciousness, or in both. The progress of evolution through successive lives is gauged by the increment of consciousness. Even in the West, the extent of the actual consciousness of daily life is

recognized as being only an infinitesimal fraction of the latent consciousness. One German writer has said that the conscious is merely the coughing of the subconscious; and someone else has spoken of the subconscious as an ocean of indefinite expanse and depth, normal consciousness being the waves on its surface. These two main divisions of consciousness form the basis of the two main divisions in the Eastern church, one of which is concerned with the so-called "normal" consciousness, that is, the actual consciousness of daily life, the other with the subconscious. The branch of the church which deals with the conduct of daily life is called in Japanese *kengyo*; *kyo* meaning 'gospel,' or 'doctrine,' or 'system,' and *ken*, literally, 'visible,' that is to say, the system which deals with the visible, or material, relations. The other branch, *mikkyo*, is the same *kyo* combined with *mitsu* or *himitsu*, meaning 'invisible,' or 'non-apparent,' in the sense of 'non-material.' The former is intended for people who live in the world, as a general guide to conduct, and consists of a set of rules for unselfish living, such as the ten commandments, by following which expansion of consciousness upward will ensue after death to a greater or less degree. The object of *mikkyo*, on the other hand, is to accomplish the expansion of consciousness during life. This is the branch of study which Okakura followed. It is pursued usually by priests, more rarely by laymen. It is methodical and systematic. The various stages of growth are accurately recognized, defined, and classified, and the study is pursued as systematically as a course in mathematics or physics or botany.

The subconscious itself may be regarded as a series of concentric zones around the individual as a centre. These zones are accessible, other things being equal, in proportion to their nearness. The nearest ones are those which are most directly connected with the daily life of the individual. Outside of this comes the daily life and interests of his family, associates, and friends. Outside of this, again, the aggregate consciousness of the community in which he habitually lives. And so on. There is no limit to it. It is like a sea, in which the finite consciousness of each individual floats like a crystal of ice, homogeneous with the fluid but separate from it. This sea of consciousness, in

which the separate individual consciousness floats, is called *ku* in Japanese and *akasa* in Sanskrit. These words are generally translated 'ether,' and have naturally given rise to a good deal of discussion which was inevitable until Western science had advanced to the point where it became aware of the existence of the subconscious. Even now the terms are not quantitative. That is to say, we have only reached the border of the subconscious. We have no idea of its extent. *Akasa* means all that we mean by the subconscious, and vastly more. The lower stages are close to the consciousness of daily life and abound in reflections of material forms; but inasmuch as the main object of the system is to get away from matter and liberate consciousness from the forms imposed on it by the material world, these early stages are necessarily a source of danger, and it is precisely to avoid this danger that the system of instruction is surrounded by so many safeguards. If a man acquires an expansion of consciousness only on the plane of his daily life, he will carry into that expanded consciousness the pursuits and interests of his daily life, which he will follow with more freedom and more force than he could under ordinary circumstances; and as every action of daily life goes to the building up of character and produces results later, the very increase of power will mean, in the case of such a man, an increase in the strength of the ties which attach him to the material world; whereas, in the Buddhist doctrine, the material world is exactly that from which he wants to get away. These interests of daily material life are the greatest difficulty in the early stages of study. They are a sort of "dweller on the threshold," to borrow Bulwer-Lytton's sententious phrase, and are merely more or less involuntary reflections or memories of the daily life and desires of the man himself. Every man is his own dweller on the threshold, and unless his fundamental aims and aspirations are high, he will have to stay there. The more intently he interests himself in his own subconscious, the more he solidifies and crystallizes the immediate interests of his own daily, human personality, which it is his main object to eliminate. If he has in his mind the ideal or conception of something better than himself, he can reach that ("All we have ever hoped or dreamed

of good shall exist"); but if he does not, he only intensifies his existing status. Not all have such ideals, and for this reason it is necessary to supply them. This is exactly what a church does. A church has a large subconscious of its own, that is, a latent or potential consciousness, which is common ground for, and accessible to, all the members of that church. Connection with this subconscious is, in the East and in some Western churches, established by certain arbitrary ceremonies called sacraments. The exact nature of these varies greatly in different churches, but the object is in every case the same --- namely, to establish a subconscious connection with, and to make a common ground of, the beliefs, conceptions, and aspirations of that church; and inasmuch as the subconscious is independent of time, the available material becomes cumulative. That is to say, every member of a church has his own latent consciousness increased by the aggregate latent consciousness of all the members of that church since its foundation, including that of its founder.

The object of all meditation in all churches is the inclusion of the latent in the actual consciousness, or, to put it the other way, the extension of the actual consciousness to include the latent. There are documents giving precise instructions as to how this should be done.

I spoke at the beginning of the quality as well as of the extent of consciousness. These two are, to a certain extent, independent of each other. The actual consciousness may be good or bad; the latent consciousness, equally, may be good or bad; and up to a certain point the expansion of consciousness may be in either direction. The question of good and bad involves of course the question of right and wrong in all its ramifications. The subject looms large, but the Eastern view of it may be stated in a nutshell. It is this. The ideal condition of consciousness, the *summum bonum*, is complete freedom and self-determination. Anything which hinders such freedom or self-determination is, by definition, bad. Matter, following laws of its own, imposes those laws on consciousness, with which it is in contact through the body, thereby hindering freedom and self-determination. Matter, therefore, from the

point of view of consciousness, represents the other extreme. Self-determined consciousness is the highest good. Matter, hindering such self-determination, represents the extreme of evil. This is the classification from the highest point of view. From a lower point of view, matter is an essential factor in the evolution and development of organic life. The fundamental characteristics of matter, and consequently of the forms of consciousness based on matter, are limitation and discontinuity and non-identity. On the other hand, the essential characteristics of consciousness are just the opposite — continuity, identity, and absence of limitation. The consciousness of a man or an animal involves the limitations imposed on it by the matter of his body. It is by and through these limitations that he gets the habit of thinking of himself as a separate entity. The one great lesson to be learned from a material body is the sense of personal identity — the ability to say 'I.' Once this ability is acquired, the question becomes this — whether the 'I,' the sense of personal identity, can be expanded or extended outside and beyond these limitations. The Kengyo teaches how this can be done after death; the Mikkyo how it can be done during life. The method of accomplishing this expansion during life is what is described in this document.

To sum up. The essential conditions of this expansion of consciousness are three. First, it must be absolutely voluntary and under control. Secondly, the expanded consciousness must be continuous with the normal waking consciousness. Thirdly, it must not involve a loss of personal identity, though this identity need not be, and in the higher forms is not, that of the normal waking personality. It is at this point that the matter of double personality attains a definite, practical bearing. A secondary personality may be voluntarily evolved and acquired which is incomparably better and greater than the normal personality of daily consciousness.

The external world of ordinary consciousness acts as a hindrance and restraint on the action of the will but also as a safeguard. The deeper one goes into the subconscious, the more both the hindrance and the safeguard are removed. A man acts, therefore, in the subconscious with more freedom on

the one hand, but consequently, on the other hand, with more potential good or harm to himself. Hence the manifold precautions with which all religions have surrounded the act of entering the subconscious. We are dealing here with the most delicate portions of the psychical machinery, and everything counts in the result of the experiment, even motives, or those cumulative motives which we call character.

WILLIAM STURGIS BIGELOW

BOSTON, MASSACHUSETTS

ON THE METHOD OF PRACTISING CONCENTRATION AND CONTEMPLATION

The Gatha says:

Not to do evil,
But to promote goodness,
To purify the will,
This is the Teaching of the Buddha.

Though the ways of reaching Nirvana are manifold, their essence lies in the Two Laws of Concentration.

Concentration is the preliminary means of clearing away the accumulated trammels of ignorance; contemplation is the right method of attaining wisdom.

Concentration nourishes the mind and the senses; contemplation is the subtle art of bringing into life the spiritual faculties.

Concentration is the high beginning of Zenjo (spiritual insight); contemplation is the environment of true knowledge.

He who practises and accomplishes these two modes of meditation, shall have all the means of benefiting himself and saving others.

Thus the Hokke Sutra says:

The Buddha himself dwells in the Great Vehicle. He is glorified with the power of Concentration and Contemplation, by which he saves all living things.

Know that these two methods are like the two wheels of a chariot, or the two wings of a bird, and that he who pursues the one and neglects the other falls into evil ways.

The Sutra says:

He who practises Concentration and seeks its bliss, and ignores Contemplation, is called a fool; he who practises Contemplation and discards Concentration and its bliss is worse than a fool.

Though the effects of these mistakes are different in the two cases, yet as regards straying into misleading paths and lingering in the rounds of life the results are equally serious. One-sided growth is incompatible with perfect development.

The Sutra says:

The Shomon (Arihats and the followers of the Lesser Vehicle), because of their superior power of Concentration, cannot grasp the nature of Buddhahood. The Bodhisattvas, because of their superior power of Contemplation, cannot grasp the nature of Buddhahood. All Buddhas have their power of Concentration and Contemplation developed equally.

Are not these two methods, the main entrance into Nirvana and the Great Result, the highway for practisers to tread, the finger-post to the attainment of the complete virtue, the real form of the highest attainment? Thus the significance of these practices is profound.

In trying to open the path to beginners it is easy to talk but difficult to accomplish. Here, therefore, without entering into deep subtleties, we shall indicate ten points which show to students the first steps of approaching the truth. The student must not underestimate the difficulty of practice because the directions are couched in simple and easy language. If his mind grasp the meaning well, he may within a fortnight attain boundless wisdom; but if he dwells on the surface of the words and follow not the injunctions seriously, years shall avail him nothing. His work will be useless, like the poor man's pastime of counting his neighbor's treasure.

The ten points are:

- I. Suitable conditions.
- II. Control of desires.
- III. Discarding encumbrances.

- IV. Harmony.
- V. Higher wishes.
- VI. Practice.
- VII. Growth of powers for good.
- VIII. Knowing the evil spirits (ma).
- IX. Curing disease.
- X. The Result.

These ten points are only indications for the beginner, to be followed in a spirit which will enable him to overcome difficulties, and will bring steadfastness and illumination.

I. SUITABLE CONDITIONS

Those who have made up their minds to practise meditation must establish five suitable conditions.

1. They must keep the Kai¹ in their purity. The Sutra says that one who keeps the Kai can develop concentration and wisdom. The Bikshu must keep the Kai in all their purity. There are three classes of those who keep the Kai:

(a) Those who before becoming followers of the Buddha have not committed the Five Great Crimes and who on meeting a good teacher have become Buddhists and received the three refuges (Sanki) and the Five Injunctions (Go Kai); who when they enter the order receive the Kai of Shami (acolyte) and eventually the Kai of monk or nun, and keep these in their purity. Such are called Keepers of the Kai of the highest order. For them the practice of meditation is sure of results, even as unsoiled cloth is easily dyed.

(b) Those who break the minor Kai, though keeping the major Kai in all their purity. These can by repentance be successful practisers of meditation, even as a soiled cloth may after washing receive the dye.

(c) Those who after receiving the Kai break both the major and minor Kai, and are therefore not capable of redemption according to the Lesser Vehicle. It is the Greater Vehicle which allows repentance in the four major Kai.

¹ "Kai" means (1) sacrament, (2) commandment.

The Sutra says:

In Buddhism there are two kinds of healthy beings: those who have never done wrong and those who, having done wrong, repent.

The process of repentance involves ten factors:

- (1) Recognizing the cause and effect of the bad action.
- (2) Having great fear.
- (3) Feeling deep shame.
- (4) Trying to atone. The Daijo Sutras indicate various modes of atonement to be pursued.
- (5) Confessing the fault.
- (6) Avoiding the recurrence of similar thoughts and deeds.
- (7) Wishing to protect the Faith.
- (8) Wishing to save all living things.
- (9) Meditating on the various Buddhas.
- (10) Contemplating the non-existence [of the nature] of wrong.

If one pursue these ten methods, purify his place of meditation, put on clean robes, burn incense and scatter flowers before the Three Treasures, and repent with sincerity, his crimes shall vanish.

How shall the practiser know that his grave crimes have vanished? When on repenting sincerely he shall find that his mind is at ease and his body light and alert, when he has dreams of good portent, when he sees rare and beautiful visions, when he finds the growth of goodness in his soul, when in the midst of his meditation he feels his body like a cloud or a shadow, when he shall pass through various stages of meditation and suddenly get an insight into the nature of things, when he shall be so filled with delight in the Law that he shall be relieved of all wrong, then by these tokens he may know that his grave crimes have vanished.

If then after this he keep the Kai in their purity he may acquire the fruit of meditation, even as a torn and soiled cloth, by being sewn together and cleansed thoroughly, may receive the dye.

If the practiser wish to be relieved of the effect of his suit, he may attain the result even without performing the various

rites ordained by the Law. He must feel a thorough and deep-seated shame within himself, confess his sins to the Three Treasures, cease from the wish to repeat them, meditate steadily on the non-existence of [the nature of] sin, and dwell on thoughts of the Buddhas, and if on leaving meditation he burn incense and make obeisance to the Buddhas, repeat the Kai, and read the Sutras, he shall be redeemed from his sins. The Myoshojo Sutra says:

When man has committed grave sins, when he has a fear therefrom and wants relief, there is nothing but Meditation (Zenjo) to help him. Such a man must sit in a quiet place and control his mind and read the Sutra, then he shall have redemption and feel himself attain the Sammadhi.

2. Concerning dress and food.

Garments may be of three kinds:

(a) The first is like that of the Himalayan hermit who contents himself with any garment that covers his body. This is possible to those who do not mingle with people and whose power of endurance is strong.

(b) The second is like that of Kashiapa, who followed the way of the mendicant, keeping only three garments discarded by men and no other.

(c) The third is for cold countries and people who are not strong and enduring. The Buddha has allowed such to retain one hundred and one articles beside these garments of the mendicants. But the important thing is to know cleanliness, to know proportion, to know contentment, and to shun covetousness and not accumulate things to disturb the mind.

There are four kinds of food:

(a) The first is that of the hermit away from the world in the distant hills who feeds himself with the herbs and fruits which nature affords.

(b) The second is that of the mendicant who begs food according to the precepts. This, if practised rightly, leads to the saintly path. There are four evil ways of eating which must be avoided, namely, eating with mouth downward, eating with mouth upward, eating with mouth shut, eating with mouth squared — these being the evil modes of eating which Saliputra taught Seimoku to avoid.

(c) The third is the food offered to the monastery by benefactors.

(d) The fourth is the food eaten in the congregation of monks.

These dresses and foods tend to impart tranquillity to the mind.

3. Concerning abode.

It is necessary to secure tranquillity and freedom from disturbance in the abodes of practisers. There are three kinds of quiet abodes:

(a) The first is deep in the mountains far from the haunts of men.

(b) The second is a monastery in the wilderness, three or four miles distant from villages, where the noise of grazing cattle is not heard.

(c) The third is a clean temple not disturbed by laymen.

4. Concerning the abandonment of occupations of the following four kinds:

(a) Gainful occupations.

(b) Social duties, such as calling on lay friends and relations, and all sorts of mundane intercourse.

(c) Artistic and mechanical occupations and worldly skilled work — giving medicine, writing charms, prophesying, and the like.

(d) All ordinary study, reading, and hearing discourse.

It is essential that the mind be free and undisturbed by such activities.

5. Concerning the necessity of obtaining good friends. Good friends are of three kinds:

(a) The first provides for the student's external needs, and furnishes him the means of pursuing his practice undisturbed.

(b) The second is the student's associate as companion and helper.

(c) The third is the Master, who leads the student through the various gates of the Zenjo.

II. CONTROL OF DESIRES

This section relates to the five desires which a student of meditation must restrain and repel. These five desires pertain to perceptions of form, sound, fragrance, taste, and touch, which enthrall ordinary mortals and absorb their attention. To overcome these desires one must know the nature of the faults involved and avoid them.

1. Desires pertaining to form.

The form of man or woman, beauty of face and figure, clear eyes and long eyebrows, red lips and white teeth, and also blue, yellow, red, purple, and other enticing colors, are a source of delight and desire to foolish minds. Thus King Bimbisara was captivated by the wiles of a courtesan, and lost himself in an enemy's country; and King Udynana, through infatuation for a woman, cut off the hands and feet of five hundred Rishi.

2. Desires pertaining to sounds. The harp, the hautboy, the flute, various sounds of the string and the bamboo, of metal and stone, and also the voices of men and women, singing and chanting — such sounds attract the foolish and betray them into sin. Thus the five hundred Rishi of the Himalaya, on hearing the song of the woman Kandara, lost their power of concentration and became intoxicated with the music.

3. Desires pertaining to fragrance. The aroma of man or woman, of food and drink, and various incenses and perfumes arouse in the foolish a sense of longing and love.

4. Desires pertaining to taste. The sweet, the sour, the bitter, the salt, and the astringent — such flavors lead one to dwell on the joys of the palate and thereby engender lust and indulgence. Thus for his inordinate love of butter a greedy young anchorite was reborn as a mite in butter.

5. Desires pertaining to touch. Whereas the body of man and woman, from its smoothness and softness, its coolness in summer and warmth in winter, and its various modes of sweet sensation, is a pitfall to the foolish and ignorant, whereby they are led to commit follies and sins, therefore it is a danger to be well guarded against. Even Ikkaku Rishi, with his supernatural

powers, was enticed by a courtesan, who triumphantly put her foot on his neck.

Such are the five desires which ought to be quelled. Alas! the living world, though troubled by these desires, yet longs for them, adding fuel incessantly to the flames. The five desires have really no pleasure in them, only the delight which a dog gets out of gnawing a dry bone. The five desires are a source of discord, a piece of meat for which hungry birds fight. The five desires burn man, like a torch held against the wing of a bird. They are as dangerous as a venomous serpent when trodden on. They are unreal as the content of a dream. They are transitory as a spark struck out of flint. The wise consider them as treacherous enemies, the foolish court them until death, and know not what trouble they bring in later lives.

These five desires are what man has in common with beasts, who are the slaves of desires, and he is enchained thereby to the wheel of painful existences. The student of meditation must understand that desire is destructive and must be repelled. The Gatha says:

That life and death cease not is owing to lust and desire. Man nurses an enemy even in his touch, and this fosters trouble and pain. The nine cavities of the body all exude impurity, this the foolish know not, and take delight in them as worms revel in dung. The wise contemplate the body but are not moved by mundane pleasures. To achieve non-attachment is to achieve non-desire—this is called the true Nirvana. With single-minded practice, according to the teaching of the Buddha, count your breath and meditate. This is the way of the monks.

III. DISCARDING ENCUMBRANCES

There are five kinds of encumbrances which ought to be discarded.

The first encumbrance is that of covetousness. In the former chapter we have talked of the five desires which are external. This relates to the internal desires which need to be discarded. The practiser, when he is entering on the Path, may feel in his inner soul various desires which continually encumber his good thoughts, and it is important that these should be eradicated. It is said of Gopika that the fire of his inner desires was strong enough to burn his body, and it is possible that the fire will

burn the seeds of goodness in the student. The soul that has desires has no way of reaching the goal.

The Gatha says of one who has repented and entered the Path, who holds the begging bowl in order to save mankind:

Why should he linger in the five emotions even like the foolish one who eats what he has vomited? All desires give trouble when we try to satisfy them. They give fear, when once attained, of losing their objects, and produce worry when they are lost. Thus they are not a source of pleasure in any sense. One who gets the real pleasure of meditation is not confounded by such desires.

The second encumbrance is that of anger. Anger is the root of losing the Buddhist law, the means of falling into the evil path, the enemy of spiritual delight, the thief of righteousness, the storehouse of evil tongues. One thinks of the wrong done to him in this life, of the wrong done to one near him, of the delight our enemies have in our discomfiture. These cause in the past, present, and future nine kinds of worry, thereby forcing anger, and through anger hate, and through hate the wish to injure others. Such are the encumbrances arising from anger. It is necessary that they should not be nurtured but speedily discarded.

Daivana once asked of Buddha in the Gatha, "What kills peace and pleasure, and what is the fundamental poison which destroys all good?" The Buddha answered in the Gatha, "By killing anger one gets peace and happiness. Anger is the fundamental poison, anger destroys all goodness." If one knows this clearly he should through benevolence and patience destroy anger and have the pure mind.

The third encumbrance is that of sleep. Sleep is the darkness of the soul. When darkness is on the five senses, it enervates the limbs until it ends in sleep, and thus retards the benefit to be acquired from real knowledge in this world, the chances of being born in Heaven and the pleasure of living in Nirvana. Sleepfulness is the most dangerous of the encumbrances which exist in our conscious state and can be discarded at will. Sleepfulness, clouding the will itself, is difficult to contend with. The Bodhisattvas have admonished their pupils repeatedly in the Gatha, saying:

Arise, do not recline with thine own stinking corpse. Thou hast a heavy sickness which is like an arrow in thy body. Thou art even like the man who is bound and about to be slain. Thou art sleeping with a poisonous serpent in the same chamber. Thou art in battle with swords clashing over thy head. What time hast thou to sleep? Sleep is the great darkness in which thou seest nothing. Thou art bereft of sight by sleep.

If the practiser feels the spirit too heavy on him he should use the whip of Zen in order to drive it off.

The fourth encumbrance is that of restlessness and the remorse thereof. Restlessness is of three kinds. The first kind is the restlessness of the body when one wants to play and sport and does not like quietness. Second is the restlessness of the mouth when one loves singing and chattering, discussing the right and wrong, and indulging in useless gossip. Third is the restlessness of the mind, when one has scattered thoughts, and likes to dwell among the mundane pleasures of literature. All this is an encumbrance to meditation, making the mind like a drunken elephant unchained, or a camel without a nose-ring. Such have to be discarded, but the remorse attendant on discarding is also a source of encumbrance. Remorse is of two kinds — one rising out of the remorse of restlessness, the other out of the great fear which endures with one who has committed grave crimes, even like an arrow which has entered the body and can not be drawn out. The Gatha says:

To do things which ought not to be done, not to do things which ought to be done, and through these faults to be burned in the fire of troubles, is the lot of the foolish man. If one repents of his crimes and after repenting feels no worry again, he is in the way of attaining peace.

The fifth encumbrance is that of doubt. Doubt is the main encumbrance which stops attainment. One who approaches Buddhism with doubt is like a man who enters a treasure-house without hands. No one who has deep doubts can have true Concentration. Doubts are of three kinds. The first is doubt in himself. When the practiser thinks that his own powers are limited and his faults in the past too grave to attain the truth, with such Concentration will be impossible. The student should not think lightly of himself, because, though he may have shortcomings, his merit in past incarnations may redeem him.

The second kind of doubt is doubting the Master, thinking that the Master is imperfect in deportment or knowledge or unfit to teach. The student ought to guard himself against such consideration. The Sutra has said of such teachers that gold has been stored in evil-smelling bags; that one must not discard the precious gift on account of its ugly covering. One should think of the Master even as the Buddha himself. The third kind is the doubt in the law itself. Ordinary men uphold their own standpoint and do not believe in accepting teachings, and even if they believe they do not practise it with due respect. If there is a hesitancy in accepting the law, there is no means of the soul being permeated with this essence. The Gatha says:

Even as a man who is on a divided path and knows not which way to go, thus doubt stops a student on his path. All doubt arises out of ignorance. In wickedness and goodness, in life and death, in Nirvana there is a fundamental law which it is dangerous to doubt. One who doubts is like a man in the hand of an executioner, even like the deer in the claws of a lion, and shall have no means of escape.

Belief is the means of entering Buddhism. Those who have no belief shall acquire nothing. By discarding the five encumbrances one gets freed from eighty-four thousand bonno.² He is like one who has paid a heavy debt, or one cured of a serious illness, or a famished person entering into a land of plenty, or a man rescued from a band of robbers. His mind shall be peaceful and calm like the sun and the moon, without a cloud and mist to darken their brightness.

IV. HARMONY

The student, when beginning meditation, shall make a vow to help all living beings and to pursue the highest road. His soul must be hard like the diamond, diligent, courageous up to the point of giving up life. He must not recede a step until all is accomplished. The student on entering Buddhism shall think on the reality of all laws and the various considerations of the good and the non-good and the four sensations of the

² "Bonno" means a vice, or bad habit. "Eighty-four thousand" is used to mean 'a great number,' 'thousands.'

inner and outer world; of the law of bonno and the karma of life and death; on the existence of the three worlds in the soul itself; then he shall begin his practice and first obtain harmony. Like the potter, who, before he prepares his utensils, will skilfully knead his clay so that it shall not be too hard nor too soft, that it may roll well on his wheel; or even like a man playing on the harp, who tunes his strings that they may be in true measure so that beautiful music may be made on them; — so the practiser has to tune his soul in the following five ways. This will bring the samadji to appear sooner, for when the mind is not in tune then there shall be disturbances and the difficulty of accomplishing good results.

First, it is necessary to regulate food. If the food is in excess, the breath will be quick, the body full, the mind will be obscured, which will cause unrest. If the food is too scant, the body will be weak, the mind hollow, and the will not strong. These two extremes are to be avoided. If one eats unclean things, it obscures the mind and senses. If one eats unwholesome things, it leads to sickness and makes the four elements at variance with one another. This must be kept in mind at the beginning. The Sutra says:

When the body is peaceful the power is increased. To know the proportion of drink and food gives calmness, and through calmness comes progress.

Secondly, to regulate sleep. Sleep is the shroud of ignorance and must not be allowed to have free play. If one sleeps too much, it dulls the mind to the perception of spiritual things and interferes with good practice. One must regulate sleep to have the spirit in calmness and purity. The Sutra says:

On the first watch and on the last watch do not forget to practise, for through sleep one passes life uselessly and attains no results.

Thirdly, fourthly, and fifthly, to regulate respectively the body, the breath, and the mind. These three should be in unison and there should not be separate instruction for each. There are three stages in meditation: the entrance, the continuance (that is, the meditation itself), and the going out. When one first enters into meditation he shall prepare his body so that all his movements, going, staying, advancing, walking,

sitting, and other movements, shall be calm. There shall be no roughness or coarseness in his movements, because thereby the breath would be rough, making his thoughts to be scattered. While sitting the body should be restful. On entering meditation one should choose the right place, and when the bench is chosen he shall see that all is soft and correct, that it shall be a place for long and easy sitting. Then he should look to his legs, and if it is the half seat (half cross), place the left leg over the right, pull it toward the body until the left toe shall be on the same level as the right knee. In case of full seat place the right leg on the left leg. Then loosen and adjust the garments. Next put your left hand on the palm of your right, place the two hands on your left leg, draw it toward your body and place it near the heart. Next take the right position for your body. Move your body and your limbs backward and forward seven or eight times to feel that they are easily and comfortably in position. After this sit up straight, having the spinal column bent neither forward nor backward. Have your head in position so that the nose and the navel shall be on the same line. Have everything easy and not strained. Next blow out the accumulated breath. In doing this open your mouth and breathe outward, but not in a hurry. Let it be continuous and free. Think that all parts of your organs are ventilated. After this is done shut your mouth and draw in the pure air through the nose. Do it about three times. If you feel that you are in good condition, once will do. Next, in shutting the mouth let the lips and teeth touch each other lightly, the tongue to be toward the roof of the mouth, not touching it. Then shut the eyes to the point of not shutting out the outer light. Then sit like a stone, and do not allow the body or limbs to move. The idea in thus regulating the body is that it may not be too rigid or too relaxed.

The regulating of the breath is of four kinds: the wind, the sigh, the air, and the breath. The first three kinds are not regular breathing, the last is correct. In the first, there is a noise when the breath goes out and in — a panting. In the “sigh” there is no noise, but the breathing is irregular. The “air” is without noise and yet not delicate. The “breath”

is when it is noiseless, delicate; when the exhalation and inhalation are continuous, almost imperceptible. This will help spirituality and there shall be delight in your capacity to do more. If you use the "wind," your breath will be scattered; if the "sigh," your thought will be intermittent; if the "air," you will be tired. If the "breath," you will have rest.

The way to regulate the mind is of three kinds:

(a) Fix the attention on the centre of the body, the solar plexus.

(b) Feel the freedom of the body.

(c) Think of your breath as passing through all the pores of the body.

The breath should be very slight — the minimum. This is when you enter meditation. The secret of regulating the breath is in making it not too smooth and not too harsh.

The regulation of the mind when you have entered meditation is two-fold. One is to quell all wandering thoughts and not let them float or sink. When the mind is dark and has no remembrance, and the head has a tendency to fall forward, then let your thought be on an imaginary object at the end of the nose. Look at the tip of the nose. Floating thoughts come when the body is not perfectly at ease. Then place your thought downward and fix the thought in the neighborhood of the solar plexus.

In the aspect of meditation there are two kinds of faults, excessive laxity and excessive strictness. If one is too zealous, there will be an acute pain felt in the breast. In this event take it easily and think that all your breath flows downward. If there is too much laxity when one enters meditation, the body will feel tired, the mouth will water, and darkness will come over the mind. Then one should concentrate more, and steady his body. The essence of regulating the soul lies in coming to a fineness of focus instead of diffuseness. The way of staying in meditation is three-fold. The first is to know that the body, the breath, and the mind are all regular. One shall see that when the body is in regular position the breath shall be equally regular; and when these two are regular the mind will also be regular, so that all three shall be in tune.

In coming out of meditation one should stop concentration and think of other things. He should open his mouth and freely exhale, with the thought that the breath passes through all the organs of the body; then slowly move the body, then move the shoulders and hands, then move the legs until you feel that they are not stiff. Then with your hands massage all parts of the body. Then rub your hands together to make them warm. Then rub the eyelids before opening the eyes. Wait until the heat of your body ceases. It is time then to cease meditation. If one does not do this he will feel a headache and pain in the bones like rheumatic pains, and shall not get ease in later meditations. The essence of this process is to return to the coarseness after the fineness.

The Gatha says that there is an order in going and stopping; the fineness and coarseness must be regulated like the training of a horse, in which there are methods of running and stopping.

V. UTILITY (HIGHER WISHES)

Those studying meditation should have five objects in view:

1. The wish to be freed from all mundane misconceptions and falsehood, and to attain true wisdom. This thought constitutes a wish, a prayer, and a pleasure. It is a higher desire for the deeper delights of the law. As Buddha said, "All goodness, even, comes of desire."

2. Diligence. To keep the Kai, to reject the five impediments, to apply yourself assiduously in the first and last watch in the night, to practise continuously until the truth is attained, even like the driller of fire who continues drilling until the spark is got.

3. To know that the worldly knowledge is to be despised and that only Zenjo is to be valued, that through Zenjo you shall develop higher intelligence and supernatural powers for saving mankind.

4. To know the relative value of spiritual and mundane pleasures. Mundane pleasures are evanescent, affording more pain than joy, whereas the pleasures of the Zenjo are eternal and entirely free from pain.

5. Singlemindedness. When one sees the superiority of the spiritual attainments over the mundane he must set his mind to the single purpose of arriving at them, even as the traveller who has studied the topography of a place, and chooses and pursues the straightest road. The Sutra says: "Without wisdom there is no Zen, without Zen there is no wisdom."

VI. PRACTICE

The practice of meditation is of two kinds, namely, the sitting meditation and meditation in various postures and circumstances.

A

Sitting meditation is fruitful of results and is the best way for students. There are five different modes in sitting meditation.

1. To cure the turmoil of the mind at the beginning of sitting. One will feel the mind at unrest when entering meditation. He should practise concentration to conquer unrest. If this does not work, he should practise contemplation. There are three kinds of concentration to stop unrest:

(a) The concentration of mind on a spot. This is to focus the mind on the tip of the nose or the navel, etc., as the Sutras say, to chain a playing monkey.

(b) To control the mind. When a thought occurs, control it and do not let it run off by itself.

(c) Fundamental concentration. To know the non-reality of things and not to dwell on thoughts, is the way of stopping thoughts.

When the student finds that these are still inadequate to stop restlessness of mind, he should dwell in contemplation and think that existeth not, the present is only transient, and the future not within reach, that all modes of thought in the three tenses are intangible, that things are and are not. He should feel that all perception is the result of the six inner senses acting and reacting on the six sensual worlds, that existence and non-existence is a nominal distinction, that out of the cessation of existence and non-existence the tranquillity of the Nirvana

is born. To know clearly that all being is in the mind, and that the mind itself is formless, is the way to attain restfulness. If one concentrates too much, there is danger of causing insanity. By contemplation one gradually enters into the regular path, even like a student of archery, who, though he may at first shoot wide of the mark, by practice will hit the bull's-eye.

There are two kinds of contemplation:

(a) The contemplation of antithesis. Such is the contemplation of Impurities, in order to cure covetous desires; the contemplation of Benevolence, in order to cure anger; the contemplation of Equality, in order to cure selfishness; the counting of the Breath, in order to cure the ebullition of thoughts.

(b) The regular contemplation. This is to contemplate the formlessness of things, which is caused by In-en (cause and environment); to know the unreality of In-en is to arrive at the reality of things.

2. To cure the disease of floating and sinking thoughts. When the student in meditation feels that his mind is not clear, with his memory gone and a tendency to drowsiness, this is the sinking mood. Then he should practise contemplation. If on the other hand he is restless and uneasy, this is the floating mood and he should practise concentration.

3. It may sometimes happen that either of these methods may not be sufficient to produce the desired result; then the student is at liberty to practise either concentration or contemplation as best suits himself. The main object is to get restfulness and cessation of worry.

4. When the student has conquered restlessness and entered into meditation, he will, from the nature of the mind in meditation (Zo), feel an elation and a pleasure. If one dwells too much on this pleasurable state he will nurse a bonno. This is to be cured again either by concentration or contemplation.

5. To develop the power of contemplation and concentration symmetrically. If one enters the Zenzo through concentration, he is apt to lack wisdom; it is known as the foolish Zo. One finds difficulty in rising above himself and is clogged at each step of advancement. Then he should practise contemplation. If one enters the Zenzo through contemplation, he is apt to lack

power. It is like a torch, however bright it may be, that flickers in the wind. Then he should practise concentration, and he shall find the flame burning steadily.

B

To practise meditation in varied posture and circumstance. Though sitting is the best posture to practise meditation, one who has no opportunity continuously to practise sitting must not fail to pursue his studies as circumstances permit. These circumstances are of six kinds: 1. Walking; 2. Standing; 3. Resting; 4. Reclining; 5. Working; 6. Talking.

The student when walking should think on the object of the walk, whether or not it is for the sake of bonno and for the purpose of evil. If for bonno and evil he should stop walking. To practise concentration in walking is to dwell on the various bonno and matters of good and bad which arise from the fact of walking, to know that the fact of walking and things pertaining to walking are intangible. This is to stop the rising of restless thought.

To practise contemplation in walking is to think that walking is a motion of the body caused by the will, but that the will itself has no form as walking — that the walker and things pertaining to walking are empty and at rest.

The same is to be practised in standing, resting, reclining, working, and talking.

Next is the practice of meditation in relation to the senses and the world of senses — the eye and forms; the ear and sound; the nose and smell; the tongue and taste; the body and touch; the mind and law.

(a) To concentrate in the case of vision is to think that form is like the reflection of the moon in water and has no reality, not to arouse covetousness on seeing desirable forms, not to arouse anger and worry on seeing undesirable forms, not to arouse wonder and criticism on seeing things neither desirable nor undesirable.

(b) To contemplate in the case of vision is to think that all the visual world arises out of an aggregation of In-en, which is empty in itself, that it produces the visual sense which leads

to mind-sense (perception), thereby causing variety of form and the world of bonno and good and evil, but that the mind itself has no form. The same is to be practised in sound, smell, taste, and touch. Of the mind we have indicated the mode in the instance of first entering meditation. One who can practise concentration and contemplation in his walk, standing, resting, etc., may be said to be a true student of the Great Vehicle. The Taihon Sutra says:

The Buddha said to Subodi, If the Bosatsu when he walks know walking itself, when he sits know sitting itself, even unto the putting on of his garments, and with singlenindedness go in and out of the Zenzo, such a one shall be called the Bosatsu of the Great Vehicle.

He who can practise the Great Vehicle in all places shall be peerless and foremost in the world.

VII. GROWTH OF POWERS FOR GOOD

The student of meditation who practises successfully shall find that he is purified in body and spirit, and at the same time be conscious of various powers for good awakening in him. Powers for good are of two kinds. The External are the instinct of alms-giving, of keeping the Kai, of reverence to parents and elders, of respect for the Three Treasures, of understanding of the law, and the like. The external interests, if they do not grow out of true practice, are often confounded with developments.

The internal instincts are those related to the Zenzo and are of five kinds:

(a) The development of true and good breathing. The student shall find that his mind is at rest and oblivious of the existence of the mind and body. Then, after two or three sittings or after a month or two, a different mode of breathing will come which is almost akin to non-breathing. He shall feel movement in the mind and body, pain, itching, coldness, warmth, lightness, heaviness, stiffness, and hardness over the body, and then if he persists in the Zo, a pleasure will be felt which is impossible to describe. This is the development of the faculty of good breathing. The student shall know the length and shortness of his exhalation and inhalation, and feel

that the pores of his skin are open. Then with his mind's eye he will see thirty-six objects inside his body, even as one sees the grains on opening a granary. He will be greatly astonished and delighted.

(b) The faculty of seeing impurity is developed when one sees the uncleanness of his own flesh and the bones inside his body. He may also see the impurity in the fowls, beasts, garments, food, houses, and landscapes around him.

(c) The faculty of benevolence is developed when the student feels indescribable pleasure when his friends are pleased, which may be even in case of indifferent persons, enemies, and all moving creatures. His face on arising from a meditation shall be sweet and tender.

(d) The faculty of contemplating In-en is developed when the student suddenly gets an insight into the past life, and is able to judge what was the fault in past actions, and feels a delight in this knowledge.

(e) The faculty of contemplating the various Buddhas is developed when the student suddenly sees the various Buddhas in their glory and power, and delights in the vision of such helpers to mankind. The student shall feel a pure and restful pleasure, and when he arises from meditation he shall feel his body light and free, and his demeanor shall be such as to inspire love and respect in others.

The development of such faculty is to be distinguished from the false or evil developments. If in any of these developments the student feels that his body sways to and fro, or that the body is heavy as if pressed down, or even light as if able to fly, or when he feels as if he were bound by cords, when he feels shivery cold or excessive heat, when he feels excitement and delirious pleasure, or sinks into sorrow and despondency, when he feels frightened, so as to have his hair stand on end, or great joy like intoxication, such are the symptoms of the false Zo. If one stays in such conditions he is liable to become insane. The demons take advantage of his weakness and lend their powers to manifest the evil Zo, evil wisdom, and evil miraculous powers. The foolish mistake these demoniacal powers for the true fruits of the Path and believe in them. This is demonola-

try and such practisers eternally separate themselves from Buddha and fall into the way of demons. The student must guard himself from such, and must not give attention to miraculous manifestations. The development of true faculty is clear, pure, a quiet joy in the inner soul, without desire for worldly things, and marked by freedom and ease in going out of or entering meditation.

VIII. KNOWING THE EVIL SPIRITS (MA)

The ma attempt to destroy the good faculties of living things, and let them roll on the wheel of Life and Death. Thus the higher a man attains the more he shall feel the strength of the ma. There are various kinds of ma, of which the chief consists of the demons.

Demons are of three kinds:

1. Demons of the hours. The demons that preside over the twelve hours change themselves into many forms — a young maiden, a venerable man, etc., to the confusion of the student. They are the spirits of these twelve beasts: the tiger, the rabbit, the dragon, the serpent, the horse, the goat, the monkey, the cock, the dog, the boar, the rat, the ox. They may be driven away by recognizing them and calling on their names.

2. The meddling demons. These are like stinging insects which annoy the practiser at all times and tempt him to break the Kai. If the student be firm enough and dwell in the Kai, they will vanish easily.

3. The troublesome demons. These annoy the student by assuming various guises, such as parents, brothers, Buddha and bodhisattvas, fine men and lovely women, tigers, lions, and other fearful shapes. They create manifold sounds, smells, tastes, etc., to mislead him. If the student will not feel attachment, sorrow, anger, and drowsiness when they come, he is safe. The Gatha says:

Desire is the first battalion of the ma, sorrow the second, thirst and hunger the third, longing the fourth, sleep the fifth, fear the sixth, doubt the seventh, anger the eighth, vanity the ninth, pride the tenth. Such are the army which attack the practiser of the Zenjo.

The ma can be repelled in two ways:

(a) By concentration. To know that the world of ma is false, and not to worry nor fear it. To keep the mind unmoved is the way of quelling them.

(b) By contemplation. If concentration does not suffice, contemplate the fundamental equality (Byodo) of the world of Buddha and ma, that ma is not to be despised nor to be approved.

4. Express not delight when the ma vanishes. The foolish one attaches importance to their manifestations and often becomes insane. The fault does not lie in the ma but in himself. The essential point is to be sure of yourself and not worry though they may trouble you for months and years. It is therefore necessary that the beginner should have a good instructor to teach him how to deal with the ma and shingons (dharanis). Otherwise his mind will be maddened, he will worry and rejoice alternately, and become sick and die. He may attain the evil Zenjo and learn the evil mystic charms, to the ultimate confusion of himself and others. To be unmoved and not to notice is important.

IX. CURING DISEASE

If the student does not know how to regulate and harmonize breath, mind, and body, he will bring out any sickness latent in him. It is important that the student should know the form in which sickness manifests itself and the method of curing it. Though the forms of sickness are manifold, it is mainly due to two causes:

(1) Increase or decrease in the four elements. If it be an increase of the earth element, there will be swelling, heaviness, and leanness of the body. If it be increase of the water element, there will be indigestion, pleurisy, colic, dysentery, etc. If it be increase of the fire element, there will be fever, pains in the limbs, foul breath, constipation, etc. If it be increase of the wind element, there will be shivering and pain of the body, trouble of the lungs, vomiting, etc.

(2) Disease owing to the disturbing of the five organs. The disturbance of the heart causes coldness and heat in the body,

headache, and drying of the mouth, etc.; that of the lungs causes swelling of the body, pain in the limbs, closing up of the nostrils, etc.; that of the liver causes melancholia and anger, bad eyesight and dizziness; that of the spleen causes pain on the body and face and loss of appetite; that of the kidneys trouble of the throat, swelling of the abdomen, and deafness in the ear.

There are also external conditions which combine with these internal causes to produce sickness. Sickness may also be caused by the action of demons and by the result of past incarnations. Sickness ought to be attended to speedily. It is difficult to cure when allowed to remain unattended.

Sickness may be cured by meditation. One master said, Keep your mind one inch under the navel, a place which is called *Udana*, and sickness will be generally cured. Another master has said, Keep your mind under your feet in walking, sitting, and reclining; this will cure sickness. These instructions are owing to the fact that the mind is situate in the higher part of the body and disturbs the equilibrium of the four elements in the lower part of the body.

A master has said, To deny the sickness is a method of curing sickness. This is because keeping the mind at rest is pleasurable and leads to the cessation of pain.

The methods of curing sickness are manifold. It can be accomplished by using different kinds of breathing: (1) the upper breath; (2) the lower breath; (3) the full breath; (4) the continuous breath; (5) the vanishing breath; (6) the hot breath; (7) cold breath; (8) quick breath; (9) contained breath; (10) harmonious breath.

(1) cures heaviness; (2) cures lightness; (3) leanness; (4) debility; (5) too much vigor; (6) coldness; (7) heat; (8) interruption; (9) shivering; (10) weakness.

The student may also use appropriate medicine (metal, stone, grass, wood) to cure sickness.

Demoniac sickness can be cured by a firm mind with the help of shingon.

Sickness arising from the effects of past incarnation can be cured by repentance and virtuous actions.

X. THE RESULT

When the student practises meditation, and knows that all things arise out of the mind; that cause and effect and environment are empty and illusory; that because of their emptiness all laws are not real, then he shall see no need to attain Buddhahood nor any desire to save mankind. This stage is called Yegan (Eye of Wisdom). If one dwell in this stage, he falls into the position of Shomon and Arhats. The Sutra says:

All Shomon take pride in saying, I shall not be glad even if I hear the Buddha has appeared and is teaching mankind, for all laws are non-existent, with no birth or death.

Such a one makes nothingness the true standard. He cannot arrive at the spirit of Bodhi by his own power of concentration, nor approach Buddhahood. True Bodhisattvas must not stay there and form attachment and love for emptiness. At this stage he must enter into the contemplation of the illusory, dwelling on the thought that though the mind is itself vacant, by relation and opposition it creates things and distinctions, that out of the distinction of things come the innumerable creatures of the Six Paths which it is desirable to lead to the truth. This is called the Byodo Kan (Contemplation of Equality), and is also called Hogen (Eye of the Law).

These two modes are not ultimate and real. The truth is in knowing that the nature of the soul is neither empty nor illusory, in the Middle Path which contains and at the same time transcends emptiness and illusion.

The Middle Path is the universal knowledge — the eye of the Buddha. Through its power one can clearly see the Buddha and rest in the Great Vehicle. One can sit quietly and yet go fast as the wind, arrive at the abode of Buddha, wear the garment of Buddha, ornament himself with the glory of Buddha. He shall have purity in the six senses and be cognizant of all. He shall be friends with Monju and Fugen and dwell in the body of the Law. He shall appear in the Tusita Heaven, descend into the world, achieve monkhood, attain enlightenment, and reach Nirvana.

The Bosatsu at the first opening of the soul already attains the true enlightenment; the beginning is the end. Buddhahood is the ultimate Contemplation, Nirvana is the ultimate Concentration. In Concentration and Contemplation is the whole of Buddhist achievements. The Konkyomyo Sutra says:

The Buddha at the beginning is a mystery; the Buddha at the middle stage is covered with glory; the Buddha at the later stage is the indestructible.

A Gatha in the Hanshu Saumei Sutra says:

All Buddhas in their minds have got freedom. The mind of itself is pure and stainless. All Paths are clean and have no color and form. The student of this truth attains the Great Road.

The practiser must, however, first divest himself of the five encumbrances. Unless he does this, his efforts will be useless.

THE AUTONOMY OF MEDIAEVAL PHILOSOPHY

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IN an article entitled "Recent Tendencies in Roman Catholic Theology," in the number of this REVIEW for July 1922, Dr. George La Piana has criticised my interpretation of the history of mediaeval philosophy.

I

My fundamental thesis is that in the thirteenth century there is a distinction between philosophy and theology, and that philosophy has an autonomous value. For Dr. La Piana, on the contrary, there is properly speaking no "consistent and independent philosophical system" (p. 251). Philosophy is the handmaiden of theology, and a view such as mine is an artificial construction, abandoned by mediaevalists, and in process of disintegration.

Now one need scarcely recall the assertions of mediaeval thinkers who insisted upon this distinction between philosophy and theology.¹ For Dr. La Piana is unwilling to accept their testimony in the matter. But since he prefers modern interpreters, may we perhaps follow him on his own ground. Is it then true that modern investigators have abandoned the view of an autonomous mediaeval philosophy?

At the very moment of the appearance of Dr. La Piana's article, one of these mediaevalists, M. Étienne Gilson, professor of mediaeval philosophy at the University of Paris, emphasizes this independence as an uncontested fact:²

¹ Not only the great writers of the thirteenth century, such as Thomas Aquinas, are explicit upon this distinction, but many other less known writers agree in making it. Such, for example, is the *Summa Philosophica* of an anonymous author of the thirteenth century, recently published by Baur — one of the most remarkable treatises of pure speculative philosophy. The results of the recent investigations of E. K. Rand and F. Klingner on Boethius indicate that the differentiation of philosophy from theology already appears in the *De Consolatione Philosophiae*.

² Étienne Gilson, *Études de philosophie médiévale*, Strasbourg, 1921.

On a longtemps considéré comme allant de soi que l'essence même du thomisme se réduisait à une confusion naïve entre la philosophie et la théologie. On commence à reconnaître que il n'en fut rien. . . . Le thomisme est une des manifestations les plus caractéristiques de l'indépendance de la raison humaine (p. 76).

S. Thomas est le premier des philosophes modernes au sens plein de ce mot; . . . il est le premier occidental dont la pensée ne soit asservie ni à un dogme, ni à un système. . . . Lorsque les travaux nécessaires auront établi que, comme Albert le Grand et S. Thomas ont restauré pour nous l'idée de philosophie, Robert Grossetête et Roger Bacon réinventèrent pour nous l'empirisme, on renoncera peut être à la dangereuse habitude de faire commencer au XVII^e s. l'histoire de la philosophie moderne (pp. v f.).

Le thomisme, dans ce qu'il a de plus profond et de plus original, c'est cet effort même d'honnêteté philosophique, d'acceptation totale des exigences du réel et de la raison (p. 124).

The whole work of Professor Gilson strikes this note. And it is interesting to observe that he is the successor of M. Picavet, whose misinterpretation of mediaeval speculations as a kind of philosophico-theological pot-pourri has been considered inadequate.

Another writer, Mr. Clement Webb of Oxford, in his *Studies in the History of Mediaeval Theology* (Oxford, 1915) points out that the correction of Pfeiderer's views — with contentions similar to those of Dr. La Piana — constitutes the point of departure of his own work. He maintains, "that in respect to the middle ages the actual extent of the disabilities imposed by the Church upon the freedom of speculation might easily be exaggerated" (p. 138). Moreover, he considers the doctrines of Anselm, of Abelard, of Thomas Aquinas, as valuable contributions to the philosophy of religion.

More recently, Mr. Philip Wicksteed in his *Hibbert Lectures on The Reactions between Dogma and Philosophy* (London, 1920) has expressed himself in a similar vein.

Finally, the distinguished researches of Professor Baeumker and his school, of Grabmann and of Mandonnet and Ehrle, have sufficiently corroborated the thesis which I have striven to maintain. The autonomy of mediaeval philosophy is not then quite so fully discredited as Dr. La Piana would have us believe.

II

The question of whether one is to acknowledge the existence of a "common synthesis" among mediaeval thinkers is of less importance. What I mean is, that there is a twofold methodological procedure to which historians of philosophy have long been committed. The philosophical systems may be viewed either with emphasis on their differential aspect, or with reference to their common doctrines. Those who follow the former of these methods limit themselves more strictly to the chronological succession of systems, while those who follow the latter find their interests in the transmission and the affiliation of common systematic elements.

The existence of such a "common synthesis" in mediaeval philosophy is the thesis which I have undertaken to maintain; and it may be studied as one studies the *type* of a Gothic cathedral, or of a mediaeval city of the thirteenth century. Thus, objections against M. Émile Mâle's studies of the type of the Gothic cathedral would hardly be in point.³ This conception of a "common synthesis" is in perfect harmony with the civilization of the thirteenth century, a conception which dominates the whole structure of organized society — of religion and art, of political and economic institutions.

That Dr. La Piana does not accept this common synthesis is his privilege. But his thesis that the view finds no acceptance, and that as an historical construction it falls to the ground, is surely another matter. More sustained investigation of the philosophy of the thirteenth century reveals an increasing variety and diversity in its content, but the very masters who have done most to bring out this fact into full relief have remained faithful to the theory of a common synthesis. It is Clemens Baeumker who speaks of a *Gemeingut der Scholastik*. In one of the last studies consecrated to Alfred of Sareshel, this author says:

³ *L'art religieuse au 13^e siècle: Étude sur l'iconographie du moyen âge et sur ses sources d'inspiration*, Paris, 1910

It may be said with certainty that not only the whole cultural framework of the middle ages, but also the products of their philosophical speculations exhibit a far reaching homogeneity.⁴

And in the opening pages of a history published in 1921 by Dr. Grabmann, I read the following:

We may, with Cl. Bacumker, regard the unity of this formal and material content as *Gemeingut der Scholastik*, or with de Wulf we may designate it *la synthèse scolastique*.⁵

This is not the place to demonstrate why this common synthesis is not an "artificial product," nor how the parts of this synthetic unity are organically interwoven. I have had but one object in view in writing this note: to point out that the consensus of opinion of specialists engaged in the study of mediaeval philosophy is not altogether in agreement with Dr. La Piana, and that my interpretation is not "entirely arbitrary and unhistorical" (p. 251).

⁴ "Auch das ist richtig dass, wie die Geistesgebilde des Mittelalters überhaupt, so auch seine philosophischen Geistesprodukte eine weitgreifende *Gleichförmigkeit* zeigen," etc. 'Die Stellung des Alfred von Sareshel und seine Schrift *de motu cordis* in der Wissenschaft des beginnenden XIII. Jahrhunderts' (Sitzungsberichte d. kön. Bayer. Akad. d. Wissenschaften, Abh. 9), München, 1913, p. 5.

⁵ "Wir können mit Cl. Bacumker dieses einheitliche formale und inhaltliche Gepräge als 'Gemeingut der Scholastik', mit M. de Wulf als 'La synthèse scolastique' bezeichnen." Geschichte der Philosophie. III. Die Philosophie des Mittelalters (Sammlung Götschen), Berlin, 1921, p. 27.

THE TOMB OF THE APOSTLES AD CATACUMBAS

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IN the number of this REVIEW for January 1921, Dr. George La Piana discussed, in the light of the most recent discoveries at Rome, the several hypotheses which have been put forward in regard to the ancient tradition connected with the church of San Sebastiano at Rome. He there controverts the view proposed in my *Petrus und Paulus in Rom* (1915) that a translation of the relics of Peter and Paul to the Catacumbae, that is to the site of the later basilica of San Sebastiano, took place on June 29, 258, and defends the opinion, held also by eminent archaeologists in Rome, that what took place ad Catacumbas in the year 258 was only the establishment of a memorial festival in honor of the two apostles. His acute argument skillfully detects the weak points of my position, and at the same time contains so much that is new as to give me a welcome opportunity for a reëxamination of the evidence. A necessary preliminary to this was a journey to Rome and the personal inspection of the excavations, which I was able to make late in April 1922.

It may be taken as accepted that the original text of the Filocalian Calendar is not that found in the corrupt manuscripts of the Chronographer of 354, but is to be arrived at through a combination with the Martyrologium Hieronymianum.¹ The true text should read: *III Kal. Jul. Natale sanctorum apostolorum Petri et Pauli: Petri in Vaticano, Pauli vero in via Ostensi, utriusque in catacumbas. Basso et Tusco cons.* The consular year named is 258 A.D.

La Piana is entirely correct in remarking that nothing here directly attests a translation of the bodies of the apostles; the supposition that in the year 258 a memorial festival of the apostles was established would fully satisfy the wording of the

¹ La Piana, pp. 60 f., and Lietzmann, *Petrus und Paulus in Rom*, pp. 81 f.

text. But when he adds (p. 61): "On the contrary, this origin [a translation] is implicitly excluded by the assumption that the 29th of June is the *dies natalis* of the apostles," he proves too much for the good of his theory. It is generally admitted that in the fourth century the 29th of June was celebrated as the *dies natalis* of the two apostles, but it is also more than probable that this day cannot have been the actual historical day of their martyrdom. The Roman liturgical tradition betrays no knowledge of days of martyrs' deaths before the year 200.² On the other hand the date in question did not arise from a liturgical constructive theory, as appears to be the case with the oriental festival of Peter and Paul on the 28th of December.³ Therefore the 29th of June must have some historical significance, and it is most natural to connect it with the year mentioned in the tradition, and to regard June 29, 258, as the day on which the liturgical festival in honor of the apostles Peter and Paul was initiated — and in fact both initiated and observed for the first time.⁴

So far my learned critic might agree with my argument, for the difference between us here is slight; but he would then ask me, with all the greater emphasis, why I assume a translation of the apostolic relics, which Filocalus does not mention, and against which, as I myself acknowledge, considerable arguments can be urged. My answer is: first, because of the testimony of Damasus; secondly, because of the archaeological facts; thirdly, because of the general principle that in antiquity church festivals were not instituted by an arbitrary decree, but arose out of some tangible liturgical act, which in this case is most easily conceived as a translation.

The verses of Damasus read as follows:

*hic habitasse prius sanctos cognoscere debes,
nomina quisque Petri pariter Paulique requiris.*

La Piana's statement (p. 65), "It cannot be denied that the

² This I think I have shown; *Petrus und Paulus in Rom*, pp. 90 ff. La Piana also (p. 65) considers the date June 29 as not historical.

³ *Petrus und Paulus in Rom*, pp. 92 ff.

⁴ La Piana (p. 90, note 32) characterizes this view as "not improbable," but in so doing he destroys his own argument in the text (p. 61).

verb *habitare* is found in the epigraphic terminology in the meaning *to be buried*," does not cover the ground. I still find my argument⁵ convincing, that the phrases which follow reflect the customary expressions of Damasus, and that therefore the poet intended here by *habitasse* to express the same idea which he habitually expresses in such a connection, namely: 'Here were the martyrs buried.' Parallels are more significant in the case of Damasus than with other poets because he is fond of repeating both ideas and language.

Accordingly, while it is, to be sure, "not impossible," as La Piana proposes, to interpret *habitasse* here "in its primary meaning 'to dwell' of a living person," yet the interpretation is not free from objection, and I cannot accept as "very likely" the theory that Peter "found a refuge while living in Rome" in the villa whose walls have been brought to light beneath the church of San Sebastiano. For if La Piana refuses to admit a translation in the year 258, on the ground that such translations cannot be proved to have taken place in Rome before the latter part of the fifth century, he ought to have still stronger objections to the supposition of a local tradition about an apostle's place of residence which wholly lacks liturgical support, and which (since it must have arisen in the first century) presupposes a curiosity about such matters very strange for that time and with analogies only at distinctly later dates. To my mind such a tradition, even if it were attested for the fourth century, which is not the case, would be quite incredible. La Piana's praiseworthy caution in rejecting (p. 89, note 22a) Wilpert's use of the graffito *domus Petri* in one of the excavated chambers, need not rest for its justification solely on the date in the fifth century assigned to the graffito on palaeographical grounds, for Franchi de' Cavalieri in another connection⁶ has called attention to a pseudo-damasine inscription (No. 82 Ihm) in which the burial chamber of St. Hippolytus is designated as *domus martyris Hippolyti*. That agrees perfectly with the frequent pagan designation of the grave as *domus aeterna*.⁷ More-

⁵ Petrus und Paulus in Rom, pp. 107 f.

⁶ Note agiografiche 5 (1915), p. 123.

⁷ See Dessau, Inscriptiones latinae selectae III. 2, Index, p. 939; Carmina epigraphica, ed. Buecheler, No. 662. 1.

over La Piana has to assume an inaccuracy on the part of Damasus. The latter says *hic habitasse sanctos*, and names Peter and Paul with emphasis, so that both apostles would have to be supposed to have resided ad Catacumbas. This strikes La Piana as legendary, and he explains the legend as having arisen from the later habitual combination of the two apostles as a pair — “a binomial like Castor and Pollux.” So he cuts the statement of Damasus in halves, and supposes Peter to have dwelt ad Catacumbas, while Paul was added later by the legend. That is perhaps not impossible, but certainly not obvious; and clearly this explanation sacrifices the exact interpretation of the text of Damasus, which my view, I hope, preserves. Equally beside the mark is Delehayé's objection⁸ that Damasus ought to have said:

corpora quisque Petri pariter Paulique requiris,

instead of *nomina*, if he intended to refer to the place of burial. *Requiris* here does not mean ‘thou seekest,’ but ‘thou askest.’ Damasus means, ‘Here once Saints lay buried; if thou askest their names, I answer, “Peter and Paul.”’ This is the meaning in Damasus 10, 2 (ed. Ihm): *hic soror est Damasi, nomen si quaeris, Irene*. For *requiris* Ihm compares appropriately *Carmina epigraphica* (ed. Buecheler), No. 748. 28, *nomina sanctarum, lector, si forte requiris*, and such phrases are common enough in the language of metrical epitaphs. For instance *Carm. epig.* 696. 3, *nomen dulce, lector, si forte defunctae requiris*; 1357. 3, *quae tegitur tumulo, si vis cognoscere, lector*; Damasus, *carm.* 34. 1, *quisque vides tumulum, vitam si quaeris opertae*, etc. This very common form is in our case varied to read: ‘If thou askest after the persons (*nomina*) Peter and Paul, know that they were buried here.’ We find *nomen* used in this way in the pseudo-damasine inscription, No. 87, *hic votis paribus tumulum duo nomina servant Chrysanthi Dariae*.

Accordingly our inscription can hardly be understood in any other sense than as I have interpreted it: ‘Here once the two apostles lay buried.’ To what date Damasus assigns the burial,

⁸ H. Delehayé, *Les origines du culte des Martyrs* (1912), p. 308, cited by La Piana, p. 90, note 28.

— whether he believed it to have taken place immediately after their martyrdom under Nero or in the year 258 — cannot be determined from the *prius* of the text; and also that Damasus was correct in what he states is not proved by the mere existence of the inscription, of which indeed the original is no longer extant. La Piana presents impressively the view that the verses which follow are colored by the antagonism which divided Rome and the East in the time of Damasus and came to a climax in 381; but the parallel phrases of poems No. 52 and No. 46 make it seem doubtful whether the words have here any such peculiar significance.

We may now turn to the examination of the archaeological facts. To the full bibliography of the excavations at San Sebastiano given by La Piana I can add but little. The results of the work down to April 1916 are contained in the fundamental publication of Dr. Styger in the *Dissertazioni della Pontificia Accademia Romana di archeologia*, ser. II, vol. XIII (1918), with most careful descriptions and abundant figures, plans, and plates. On the later excavations articles have appeared in the *Studi Romani* and in the *Nuovo Bullettino d'archeologia*, and Dr. Styger gives a good summary in the *Zeitschrift für katholische Theologie*, vol. XLV, pp. 549-572 (Innsbruck, 1921). Plate I of the present article combines all the previous drawings in a single outline sketch and Plate II gives a vertical section.

The history of the site has been briefly as follows. The locality consists of a cliff of tufa enclosing a semicircular valley which descends steeply to a depth of about 8 meters. In the last quarter of the first century after Christ a row of columbaria was constructed on the flat top of the cliff. At about the same time, or perhaps a little later, three extensive burial chambers (32, 33, 34) were cut in the cliff, on the level of the bottom of the valley. These had façades of masonry and were decorated on the interior with stucco ornaments and various paintings, including pictures of banquets. Inscriptions show that these chambers were used for pagan burials as late as 238 A.D. To the right of these large structures two smaller tombs (35 and 36)

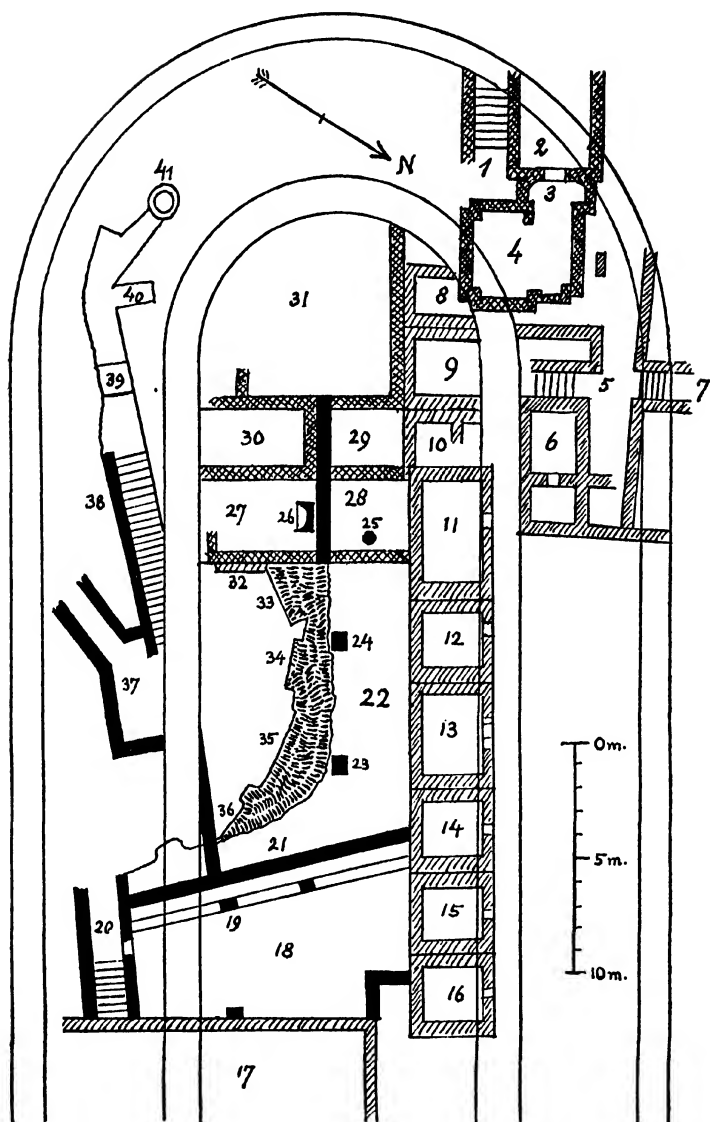


PLATE I. PLAN OF THE EXCAVATIONS AT SAN SEBASTIANO

4, Burial chamber with light-shaft. 6, 8, 10-16, Columbaria. 9, Ustrinum. 18, Trichlia. 22, Court. 25, Oil-column. 26, Cathedra. 27-31, Roman villa of the time of Hadrian. 32, 33, 34, Façades of the three large tombs in the valley. 35, 36, Crypto-christian inscriptions. 38, Stairs leading to underground passage and well. 39, Reservoir with stuccoed wall. 41, Well.

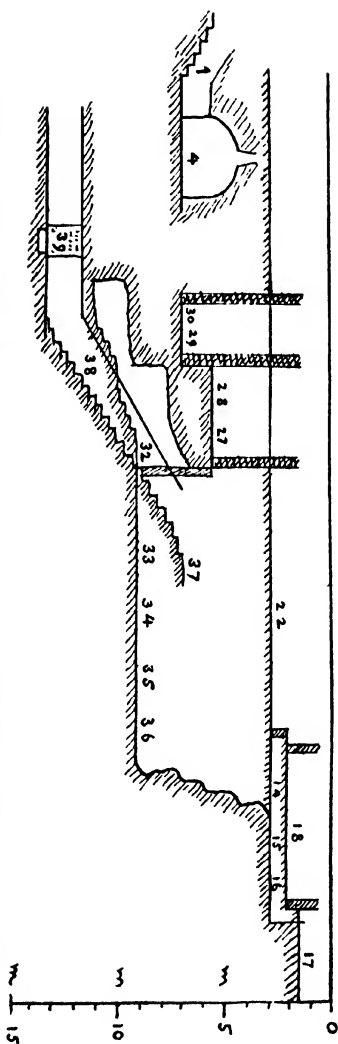


PLATE II. SECTION, SHOWING VERTICAL DEPTHS OF THE ROOMS, MEASURED FROM THE FLOOR-LEVEL
OF THE BASILICA OF SAN SEBASTIANO

were made in the rock. But side by side with the preponderating pagan characteristics of all these tombs are Christian features, which were probably not evident to pagans but revealed their true nature only to the initiate. In one chamber of tomb 33 we find scratched in the stucco of the wall ITXΘΥΣ, that is, the confessional symbol (IXΘΥΣ) with the cross (T). In the rock-wall near tombs 35 and 36 are two grave-stones the wording of which is entirely "neutral," but which by fish and anchor, palm and crown, indicate the Christian profession of the dead. About the time of Hadrian a villa was built above tomb 32, extending back as far as the row of columbaria and with its east wall resting partly on the façade of tomb 32. One of its rooms (29) made necessary the destruction of part of a columbarium. Styger has lately expressed the opinion that these rooms were not the dwelling-rooms of a villa but pagan meeting-places of a sepulchral character.⁹

In the middle of the third century the villa was destroyed; its lower (basement) rooms and the valley were filled with earth; and the long rear wall of the columbaria (11-16), as well as the wall of a building (17) which has not yet been fully examined, were used to form the back of a colonnade (18) opening toward the south-west, and of an enclosed court (22) roofed over on the north side. This court extended also over the demolished walls of the villa. At that time, apparently, the east wall of room 27 was reërected with fragments of tufa and bricks,¹⁰ and a cross-wall carried from east to west across the space 27-28. A cathedra (26) and an oil-column (25) testify to the ritual use of the new rooms. On the east wall of the so-called *trichia* (18) are the numerous graffiti invoking Peter and Paul and mentioning *refrigeria*. La Piana prints the texts of these (pp. 78 f.), and Styger gives excellent photographs of all of them.¹¹ This whole reconstruction, as is admitted on all hands, was evidently undertaken by Christians for the purpose of celebrating the commemoration of the apostles, and no doubt, as the archaeological indications suggest, in the year 258 of which the Filo-

⁹ Zeitschrift für katholische Theologie XLV, p. 567.

¹⁰ Styger, Dissert. Pont. Acc., p. 93.

¹¹ Dissert. Pont. Acc., plates I-XXV.

calian Calendar speaks. The trichlia was specially intended, like the well-known portico of the Catacomb of Domitilla, for the ritual banquets, a custom to which we find many literary allusions.¹²

This structure, however, did not long stand, for the *basilica apostolorum*, as San Sebastiano was originally called, was built before the middle of the next century, and in its turn covered up all the remains of this earlier building. The terminus ante quem for the erection of the church is fixed by the grave-stone of a child, let into the level surface of the pavement and found in situ.¹³ The child died *VIII Kal. Octob[res] Costantio Augusto S [. . . et] uliano [Caes. cons.]*, that is, on the 24th of September, 356 or 357 (according as we supply *SII* = 8 or *SIII* = 9). The graffiti in the trichlia suit best the second half of the third century, by reason both of their matter and of the forms of the scratched letters; the Constantinian monogram for Christus ✱ does not occur.

These discoveries rejoiced the heart of the archaeologists, who were looking for the tomb of the apostles; but as the excavations brought one surprise after another, their disappointment must have been equally great. Not a trace of the tomb of an apostle has so far been found. The columbaria can yield nothing, even where they were altered to admit coffins. The burial-chambers in the valley were closed by ruins. The other rooms, such as the "*Platonica*" and the "*domus Petri*"¹⁴ or the cubiculum with a light-shaft (4 of our plan), are too far from the centre of interest, and give no evidence of the burial of an apostle. An ingenious suggestion has been made by O. Marucchi¹⁵ with regard to a flight of steps (38) on the south side of the court, which lead to a depth of four metres below the level of the bottom of the valley into a horizontal passage leading to an old well (41). At the point marked 39 on the Plan the wall of the passage is entirely covered with stucco,

¹² *Bullettino d'archeologia cristiana*, 1865, p. 96; Cabrol, *Dictionnaire d'archéologie chrétienne* I, 809 ff.

¹³ Figured in Styger, *Diss. pont. acc.*, p. 27.

¹⁴ See La Piana, p. 70, plan I, A and N.

¹⁵ *Nuovo bullettino* 26 (1920), pp. 12 ff.

on which are graffiti with invocations of the apostles. At this point, Marucchi thinks, the passage was once closed by a cross-wall, and in the time of Nero the bodies of the apostles were temporarily concealed here. But this cross-wall is entirely hypothetical, and another explanation of the strange piece of plastering is more natural. A branch of the spring, namely, opens into the passage at this point and still fills with water the trough-shaped hollow floor. This was the reservoir from which the water needed for the triclia above was fetched. The wall about it was given the distinction of a coat of stucco, and this was covered with graffiti by Christians who came down to draw water. These inscriptions contain the Constantinian monogram, and are therefore later than the greater part of those in the triclia. It may be added that the presence of the branch of a spring in the chamber makes it highly unlikely that bodies were hidden there.

From these facts many scholars, among them La Piana, have concluded that there never was any apostles' grave here, and consequently no translation. Their conclusion does not seem to me justified. Styger's first report led me to surmise that the burial place of the apostles was to be sought in room 17.¹⁶ The idea met at first with strong opposition, but competent judges in Rome have recently declared it quite probable. At any rate, this structure appeared on Styger's first investigation¹⁷ to be a rebuilt sepulchral monument originally of the first or second century, and it still awaits thorough excavation and study. Let us then reserve our judgment, for nothing but a complete clearing of the whole area can fully account for the architectural plan of San Sebastiano, in particular for the lack of orientation by points of the compass and for the position of the apse over the remains of the villa.

Nevertheless La Piana thinks that at any rate in 258 no translation took place, because, first, there was no reasonable occasion for it, and secondly, because such translations were

¹⁶ *Petrus und Paulus in Rom*, pp. 120, 182. I spoke only of the rooms, not of the sarcophagi; La Piana (p. 74) misunderstood the bearing of the passage. The coffin of "Fabianus" with its mediaeval inscription was merely a guide for the tradition of a later age.

¹⁷ *Diss. pont. acc.*, p. 49.

not then customary. He points out (p. 67), following Delehayé, that by Roman law the violation of graves was liable to a heavy penalty and that for every translation a special permit would have been required. That is true, but it proves nothing, for all Christian worship was subject to heavy penalties, indeed to the death penalty, and more than usually so in the year 258. The unquestionable erection of a place of worship ad Catacumbas and the undoubted observance there of religious ceremonies were quite as much prohibited and dangerous as the removal of revered relics for ritual purposes.¹⁸ A few weeks later, on the 6th of August, 258, Bishop Sixtus found this out at the cost of his life. We are justified in assuming that the Christians of Rome in the third century had enough courage, when the interests of the church required, to undertake translations without fear of the Roman police. A shrewd and, if necessary, open-handed diplomacy would have been able to smooth the way to the attainment of their desires.

But what would have been the motive for the removal? La Piana is quite right in saying (p. 67), "There is no example in Rome of the tombs of the martyrs ever being molested by the government even in times of fierce persecutions. The Christians therefore had nothing to fear for the tombs of the Apostles." It was not for fear that the graves would be violated by public officials that the relics were transferred ad Catacumbas. A more probable reason can be suggested.

In the first half of the third century the ritual veneration of martyrs developed in the Christian church at Rome, and the impossibility of such worship at the graves of the chief apostles and first martyrs of the church must soon have been painfully felt. No trace has been found of a Christian cemetery in the neighborhood of the grave either of Peter or of Paul. The entire surroundings of both graves are purely pagan, and near Peter's grave pagans were buried as late as in the second half of the third century. The funeral chapel of Anacletus had its origin in the legendary fancies of the sixth century.¹⁹ The

¹⁸ Cf. *Acta Cypriani* i, 8, *praeceperunt etiam ne in aliquibus locis conciliabula fiant nec coemeteria ingrediantur.*

¹⁹ For the proofs see *Petrus und Paulus in Rom*, p. 152.

reports of all the excavations testify that before the time of Constantine private worship was perhaps possible at the graves of both apostles, but never any liturgical church worship. That would seem to me a sufficient reason why, soon after the middle of the third century, a suitable place of worship should have been built, necessarily withdrawn from the surveillance of the police, to which the relics were transferred. And even if it were true that such translations were not customary in Rome at that date or for a long time afterward, that would not be a valid objection to this view, for no other martyr can be compared in importance with Peter and Paul, and in no other case was the translation for purposes of religious veneration so imperative a necessity.

But that no translations took place in the earlier years is by no means so certain. De Rossi's theory of a translation of the bodies of Sts. Parthenius and Calocerus rests chiefly on the fact that both the *Martyrologium Hieronymianum* and a graffito in their tomb mention a second day of commemoration, the 11th of February, in addition to their regular holy-day of May 19. What event took place on February 11, if not a translation? The case is the same with regard to St. Bassilla, and only topographical considerations create difficulty; here also two dates of commemoration are recorded, September 22 and June 11. The strong probability then remains that in the other two cases (beside that of the year 258) where Filocalus mentions years, he refers to translations, namely that of Sts. Parthenius and Calocerus on February 11, 304, and that of St. Bassilla on June 11, 304. To Franchi de' Cavalieri's objection ²⁰ that under the merciless persecution of Diocletian in the year 304 the Christians had other things to think about than translations of martyrs, it may be answered that even the bloodiest year of persecution included many weeks and even months of peaceful freedom from disturbance, and that we do not know the particular circumstances of time and place which were finally controlling.

La Piana, however, brings forward another argument which is calculated to make much impress on the reader's mind. "If,"

²⁰ Note agiografiche V, pp. 123 f.

he says, "the translation of the bodies to their original resting places had taken place after Constantine, such a great event would certainly have left some trace in the records of the time" (p. 82). From this he draws the conclusion that even if there was a translation ad Catacumbas, — whether in 64 or in 258 makes no difference, — the bodies in any case "remained ad Catacumbas for a very brief time — one or two years. It has to be admitted therefore that the *refrigeria* were held ad Catacumbas *absente cadavere*," and so as mere commemorative meals in honor of the apostles, contrary to the usual meaning of the term.

Let us examine this reasoning in detail. In the first place, it is hazardous to assert that an event of this kind must necessarily have left some trace in the tradition, and from the lack of such a trace to infer that there was no such event. For instance, the rebuilding of the church of St. Paul is attested, as it happens, for the years 384-390, by certain documents preserved wholly by accident;²¹ we have even by a lucky chance the dedicatory column with the inscription of Pope Siricius. But the *Liber pontificalis*, which should have made official record of such things, says nothing at all about it. Indeed, if we should draw up a list of events of interest for church history which certainly took place and yet of which we have no information, it would be a long one.

But in the case before us the tradition is by no means so devoid of traces of the translation as La Piana avers. The *Martyrologium Hieronymianum* records for the 12th of December an *inventio corporis sancti Pauli apostoli*; and for the 25th of January a *translatio Pauli apostoli* which later, under New Testament influence, became the feast of the Conversion of St. Paul. One could hardly in reason expect more from the tradition than that; these are the dates of the identification of the body of St. Paul in the burial-chamber ad Catacumbas, and of the transfer to the rebuilt church of St. Paul.²² But we have no corresponding dates recorded for St. Peter! Well, if the great church of St. Peter was finished later than the (oldest)

²¹ On these see *Zeitschrift für die neuest. Wissenschaft* XXI (1922), p. 148.

²² Cf. *Petrus und Paulus in Rom*, p. 164, note 2.

small church of St. Paul (and it surely was), that is not surprising. A special *inventio corporis sancti Petri* doubtless did not take place after the body of Paul had been identified and removed. But a translation must have taken place; why then is its date not preserved?

The dedication of St. Peter's is believed (since what date I cannot here show) to have taken place on November 18; and the great new church of St. Paul, consecrated in 390, observes as its own the same dedication-day. The date of St. Paul's was perhaps influenced by that of St. Peter's, since it might have been desired to celebrate both dedications on the same day, because of the common commemoration of the two apostles on June 29. That would have been a natural consequence of the combination of the two apostles into a "binomial," on which La Piana has laid so much stress (p. 65). Accordingly, so far as I can see, nothing stands in the way of assigning to November 18 the dedication of the Constantinian church of St. Peter, which meant also the translation of the body of St. Peter to the new church. In that case we could understand why no special date is recorded for the translation of St. Peter. But the point must again be emphasized that even without any such trace in tradition, the idea of a translation would be historically justified, provided other grounds for it exist, and I think I have been able to produce such.

The graffiti, too, testify to the strong probability that when they were written the apostles actually lay buried near the trichlia. Both the acclamations, with prayer for the apostles' intercession, and the mention of the *refrigeria* point to the bodily presence of the saints addressed. La Piana (pp. 79 ff.) tries to overthrow this argument by affirming that the formula, *Petro et Paulo Tomius Coelius refrigerium feci*, must be understood as meaning, 'In honor of Peter and Paul, I, Tomius Coelius, celebrated a refrigerium,' not 'as an offering for the eternal rest of Peter and Paul' (p. 83). He infers from this that the word *refrigerium* "has lost its original meaning and its connection with a funeral rite which was the essential part of that meaning," and "that the word *refrigerium* had come in the popular use to signify merely a banquet, having a loose religious

connection and celebrated in a place dedicated to the memory of a martyr." Continuing, he refers to Augustine, epist. 29, 10, where the writer deplores the *quotidianae vinolentiae exempla* reported from Rome *de basilica beati apostoli Petri*, which no prohibitions succeed in preventing, *quod remotus sit locus ab episcopi conversatione*. Such prohibitions, says La Piana, would have primarily affected the poorer people, who would then perhaps have withdrawn their *refrigeria* to the secluded spot ad Catacumbas. Augustine's letter is from the year 392; the prohibitions of which he speaks "must have been felt strongly at least from the middle of the century. Now, according to Dr. Styger, explorer of the trichia, the graffiti might have been written during the second half of the century, and not very long before the destruction of the trichia" (p. 85). La Piana has here fallen into a pardonable error. The prohibitions of which Augustine speaks may, it is true, go back to 350 — we know nothing further about them — but the trichia was built about 250, and the graffiti, according to Styger's correct opinion,²³ were written during the second half of the *third* century, that is, from half-a-century to a century earlier. Moreover, since the basilica of San Sebastiano was built before 356, not much time remains for the existence of the trichia in the fourth century. And not only is it a questionable procedure to assume without compelling reasons that the word *refrigerium* has here another sense than the funereal, but a positive refutation is at hand in the inscription ²⁴ *at Paulo et Pet[ro] refri[geravi]*. That can only be translated: 'in the presence of Peter and Paul I have celebrated a refrigerium,' and must be understood by every unprejudiced reader to mean 'at the grave of Peter and Paul.' That some one might have written *Petro et Paulo refrigerium feci*, which La Piana with perfect propriety

²³ Styger, Diss. pont. acc., p. 88: "Possono essere assegnate alla seconda metà del III secolo. Ciò è fuori di ogni dubbio, perchè mancano affatto in esse i caratteri della decadenza, che già si rivelano nel IV secolo avanzato." He expresses the same opinion in his earlier publications.

²⁴ Styger, Diss. pont. acc., plate II, on the right, below. Styger, p. 61, reads *Paulu[m]*, but the *o* is clearly recognizable. The sense is the same with either reading; *at* is equivalent to *ad*, and, as often, is construed with an ablative; cf. Diehl, *Vulgärlateinische Inschriften* (Kleine Texte 62), Nos. 1293 ff.

renders 'in honor of Peter and Paul,' is by no means inconsistent with my contention. It is well known that martyrs were chiefly venerated at their graves; but that *refrigeria* were celebrated in their honor anywhere else than at or very near their graves has never been proved or even made probable.

I agree with my critic in his conclusion that we are "still far from having the positive proof of the assumed translation." But I still believe that by the recent excavations ad Catacumbas the probability of the view which I have urged has been considerably increased, and I hope that the future work of the spade will confirm the results reached by study of the written documents.

THREE PAPERS ON THE TEXT OF ACTS

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I. THE RECONSTRUCTION OF THE TORN LEAF OF CODEX BEZAE¹

FOLIO 504 of Codex Bezae, containing part of Acts, chap. 21, has suffered mutilation by an irregular tear, or cut, so that on the Latin side a part of verse 7, the whole of verses 8 and 9, and a part of verse 10 are now lacking; correspondingly, on the Greek side a part of verse 16, the whole of verse 17, and a part of verse 18 have been destroyed. Fortunately, however, the manuscript was examined at dates when the mutilation was less extensive than at present, and from the reports still preserved the contents of the lost portion of the Greek can be recovered with almost complete certainty. In the Latin lacuna the results are less satisfactory. In the "Introduction" to Scrivener's edition of the codex, pp. x-xiii, the editor has given a full description of the older collations and copies, and in his "Adnotationes Editoris," pp. 446 f., he has added much information drawn from these statements about the verses in question.

The codex was presented by Beza to the University of Cambridge in 1581, and arrived early in 1582. The old accounts of it which we need to consider are the following:

1. A copy of the Greek text, made in March 1583 for Archbishop Whitgift, now in the Library of Trinity College, Cambridge, with the pressmark B. x. 3. Most of the relevant portion is printed by Scrivener, p. 446. The extract printed below includes more than he gives, and is taken from a photo-

¹ For kind assistance in securing the two photographs which have made this reconstruction possible I am indebted to the friendliness of Reverend A. V. Valentine Richards of Christ's College, Cambridge.

graph which I owe to the courtesy of the authorities of the Library of Trinity College. It amply illustrates Scrivener's statement of the untrustworthiness of the copyist's work, but at one or two points something may be learned from it.

- [15] Μετὰ δέ τινας ἡμέρας ἀποταξάμενοι ἀναβαίνομεν εἰς ἱερου-
 [16] σαλήμ· Συνῆλθον δὲ καὶ τῶν μαθητῶν ἀπὸ κεσαραίας σὺν
 [17] ἡμεῖν· οὗτοι δὲ ἤγαγον ἡμᾶς παρ' ᾧ ξενισθῶμεν γενομένων
 [18] εἰς ἱεροσόλυμα, ἀσμένως ἐδέξαντο ἡμᾶς οἱ ἀδελφοί. τῇ δὲ
 ἐπιούσῃ εἰσῆει ὁ παῦλος σὺν ἡμῖν πρὸς ἰάκωβον πάντες δὲ
 παρεγένοντο οἱ πρεσβύτεροι συνηγμένοι·

2. A collation of both the Greek and the Latin pages of Codex Bezae, made for that admirable scholar and man, Archbishop Ussher, at some time before 1650, and now in the Library of Emmanuel College, Cambridge.² This may be the collation made by Patrick Young, to which Wetstein refers (*Novum Testamentum*, vol. I, *Prolegomena*, p. 30). It was used in Walton's *Polyglot*, 1657 (tom. VI, num. XVI), but incompletely and not quite exactly, so that Scrivener, who knew the collation only through Walton's excerpts, has expressed himself unjustly with regard to it (p. xi), and, indeed, seems himself to confess as much in his footnote on the same page. The collation was, so far as I can judge, trustworthy and complete, though not always indicating the distinction between the original hand and a corrector.

Below are given all the statements of this collation relating to the two lacunae. They are drawn from a photograph for which I am indebted to the courtesy of the authorities of the Library of Emmanuel College. B or Bg means the Greek, Bl the Latin, of Codex Bezae. Ussher also gives, with the symbol D (i. e. *Dublinensis*), the readings of the Codex Montfortianus (Gregory, 34^{ac}, now 61), but I have not reproduced these here.

² This appears not to be the manuscript of "*Variae Lectiones of the New Testament*," the loss of which in 1645 or 1646 is described by Dr. Parr (*C. R. Elrington, Life of James Ussher* [Ussher's Works, vol. II], 1847, pp. 244 f.), but rather that referred to in Ussher's letter to Reverend Dr. Hammond, January 14, 1650 (Works, vol. XVI, p. 174), which, so far as he there states, may not yet have been in existence in 1646.

- 8 οἱ περὶ τὸν Παῦλον] deest in Bl.
τέσσα: παρθ.] quatuor virgines. Bl
- 15 ανεβαιν:] αναβαιν: B.
Ιερουσ:] Ιεροσόλυμα. B.
- [16] συνηλθ: δὲ καὶ τῶν μαθ:] deest in B, sed additur in marg:
recentiori caractere.
ἄγοντες] οὔτοι δὲ ἡγαγον ἡμᾶς. B.
ξενισθῶμεν] καὶ παραγενόμενοι εἰς τινὰ κώμην ἐγενόμεθα παρὰ
additur in B.
Ἀρχαίω μαθ:] μαθ: ἀρχαίω. B.
- 17 γενομένων δὲ ἡμῶν εἰς Ιεροσ.] inde exeuntes venimus
Ierosol: Bl. ut videtur fuisse, κατέκλιθεν ἐξερχόμενοι
ἦλθομεν εἰς Ιεροσόλ: in Bg.
ἀσμένως ἐδέξ:] ὑπεδέξαντο δὲ ἡμᾶς ἀσμ: B
susceperunt autem nos cum laetitia. Bl.
- 18 εἰσῆει.] introibit. Bl. . . . hic graecus contextus ob
paginam laceram de[est].
πρὸς Ιακ:] ad Jacobum. Bl.

3. Mill's New Testament (Oxford, 1707, pp. 384 f., also Appendix, p. 43) gives information about Codex Bezae for both the Greek and the Latin of the missing passages.

4. A transcript of Codex Bezae was made by J. J. Wetstein in 1716, and used in his New Testament (Amsterdam, 1751-52; see vol. I, Prolegomena, p. 30).

5. A collation by John Dickinson, made about 1732 or 1733 and in recent times in the Library of Jesus College, Cambridge, was used by Scrivener, who praises it highly. It was contained in a volume lettered "MS. Sermons," and bearing the now obsolete press-mark O. θ. 2, but at present cannot be found, although the authorities of the Library kindly made a search for it for me. Scrivener's statements drawn from it seem, however, to be substantially complete.

From these sources, and from the evidence of the Latin page parallel to the Greek mutilation, the text of the Greek can be reconstructed completely, as is shown below; that of the Latin, for which we do not have any corresponding Greek, less perfectly. It is plain that the leaf suffered at least three succes-

sive tears, or cuts, one before 1650 (Ussher), a second before 1707 (Mill), and the third after 1732 or 1733 (Dickinson) and before 1793 (Kipling). There is no knowing whether the first tear had been made before the codex arrived in Cambridge.

On the Latin side the present injury affects line 23 of the page and has destroyed lines 24-33; in the Greek it has damaged lines 23 and 24, and destroyed lines 25-33. The course of the several tears was probably straighter than can be indicated in the diagram.

Acts 21, 7-10	Acts 21, 16-18
23 et mansimus diem unum apud eos	αναβαινομεν εις ιερουσολυμα
24 sequenti cum exissemus	εκ κεσαρειας συν ημιν
25 venimus caesaream	ουτοι δε ηγαγον ημας
26 et cum introissemus	προς ους ξενισθωμεν
27 in domum philippi	και παραγενομενοι εις τινα κωμην
28 evangelistae	εγενομεθα παρα νασων τινι κυπριω
29 qui erat de VII mansimus ad eum	μαθητη αρχαιω κακειθεν εξερχομενοι
30 cui erant filiae IIII virgines	ηλθομεν εις ιερουσολυμα
31 profetantes et mansimus apud eam	υπεδεξαντο δε ημας αμενωσ οι αδελφοι
32	τη δε επιουση εισηει ο παυλος
33	συν ημιν προς ιακωβον

For the arrangement of the Greek lines the Latin parallel on the succeeding leaf is a trustworthy guide. The line of the first tear is shown by the statement of Ussher's collation, although it is not certain whether it cut off the word *εισηει* or not. The line of the second tear we learn from Mill and Dickinson,³ as quoted below. To the third tear, or cut, is due the present state of the codex.

The statements of Mill and Dickinson used for determining the tears are as follows:

Mill's New Testament, on verse 16:

μαθητη] Μαθητῇ Κᾱκεῖθεν (reliquum paginae laceratur) Cant. Laceris autem Graecis, Κᾱκεῖθεν . . . ἤλθομεν εἰς Ἱεροσ . . . υπεδεξαντο . . . sic respondent Latina: Et inde exeuntes [then follow verses 17 and 18 in the text of d]

³ It is possible that the little triangle containing ^{μην} τινι κυπριω perished between the date of Mill and that of Dickinson.

Dickinson, as quoted by Scrivener on verse 16:

μ [i.e. of *μασωνι*] supra: alia verba lacerantur: κω (nam *μην* non apparet, nec *τινι κυπριω*)

Dickinson, on verse 18:

post *υπεδεξαντο* in laceratâ Pag. habetur *τη δε*

The text of nearly the whole Greek lacuna is furnished by Ussher's collation as printed above. With its statements agree almost completely the notes of Mill and Wetstein, both of whom were perhaps in part dependent on Ussher through the medium of Walton's Polyglot. In no case does any reading of Mill or Wetstein throw substantial doubt on that of Ussher.

On the following points Ussher fails us, but the other evidence is clear. In every case but one (vs. 16, *προς ους*) we have the support of d.

Vs. 16. *κεσαραιας* Whitgift, Wetstein ("*a prima manu*"), Dickinson ("*a secund. eras.*").

συν ημειν Whitgift.

προς ους ξενισθωμεν Mill (Appendix, p. 43), Wetstein. (Dickinson says, "*manus recentior ω*," and Wetstein implies the same; note that d reads *apud quem*.)

μασωνι Mill, Wetstein, Dickinson.

τινι κυπριω. For these words we have only the evidence of Ussher's silence and of d, but the reading is certain.

Vs. 17. *οι αδελφοι* Ussher *e silentio*, d.

Vs. 18. *τη δε* Dickinson.

επιουση εισηει Ussher *e silentio*, d.

ο παυλος συν ημιν προς ιακωβον. For restoring this, the most ancient part of the lacuna, we are dependent on d alone.

For the Latin lacuna in verses 7-10 Ussher gives little aid, and we are mainly dependent on Dickinson's readings, as given by Scrivener:

Sequenti cum exissemus venimus caesaream et cum introissemus in domum Philippi [*hic mutilatur Pag.*] . . . ngelistae . . . de septem mansimus ad eum . . . filiae IIII virgines . . . eam [*Desiderantur caetera horum trium versuum*].

Several of these Latin readings are confirmed by Mill and Wetstein. For *venimus*, vs. 8, Mill gives *ηλθομεν*, Wetstein *εισηλθομεν*. Since we know the course of the tearings, this text of Dickinson's can easily be arranged in lines, and a few additions made by obvious conjecture, as has been done in the diagram above.

It may be added that in a number of other passages the text of Codex Bezae is wholly or partly obliterated, or hard to read. An examination of Ussher's collation, and (if the book containing it can be found at Jesus College) of that of Dickinson, might yield valuable information at such points, and may be commended to the students of the New Testament text who have direct access to the documents. Is it not possible that modern methods of palimpsest-photography would bring out erased words and letters? The erased line in the story of Paul before Gallio (Acts 18, 17) is a case of peculiar interest.

II. "AND WHEN THE DAY OF PENTECOST WAS FULLY COME" (ACTS 2, 1)

The words of Acts 2, 1, *καὶ ἐν τῷ συμπληροῦσθαι τὴν ἡμέραν τῆς πεντηκοστῆς*, are interpreted variously in the commentaries and in English translations, and with a lack of sureness of touch that shows further philological study to be desirable. Even the elaborate discussion by Zahn in his Commentary is not free from misunderstandings which may seriously mislead the student. The passage is important both for the Book of Acts and historically; the uncertainty as to its meaning has even led some to the conclusion that the events described in the chapter did not take place on the Day of Pentecost at all. In the present discussion the opinions and conclusions of many commentators are often deliberately traversed, but it has seemed unprofitable to try to explain wherein these scholars are wrong, or to attempt a classification of their views.

The exegetical problem involves several distinct points:

(a) *Verbs of 'filling' in temporal expressions.* Expressions like Jer. 25, 12 *καὶ ἐν τῷ πληρωθῆναι ἑβδομήκοντα ἔτη*; Lev. 12, 4 *ὥς ἂν πληρωθῶσιν αἱ ἡμέραι καθάρσεως αὐτῆς*; Gen. 25, 24 *καὶ*

ἐπληρώθησαν αἱ ἡμέραι τοῦ τεκεῖν αὐτήν; Lk. 1, 57 τῇ δὲ Ἑλεισάβητ ἐπλήσθη ὁ χρόνος τοῦ τεκεῖν αὐτήν, represent an idiom common in Hebrew and Aramaic. It does not appear that the Greek language developed a parallel expression for 'completing a period of time,' although certain approaches to it illustrate the fact that the mode of statement would not be unnatural in any tongue; cf. Tebtunis Papyri 374, 10 ἡς ὁ χρόνος τῆς μισθώσεως ἐπληρόθη; see also Greek Papyri in the British Museum, vol. III, p. 136, 10. The frequent use of similar expressions (employing a considerable range of synonymous verbs) in the LXX and New Testament is plainly a Semitism. In the New Testament the phrases occur only in the Gospels and Acts.

(b) *Tenses used.* The verbs used in these expressions mean 'to fill,' 'to complete.' In most cases they are found in the aorist, perfect, or future of the passive, where either the tense or the construction shows that the verb means 'be filled' in the sense of 'be full,' 'be complete.' But in πληρώω, πίμπλημι, ἐμπίμπλημι, ἀναπίμπλημι we find that also the present and imperfect passive are sometimes, though not always, used with this meaning of 'be full,' not merely 'be in process of being filled.' The lexicons (especially Stephanus, Thesaurus, s. vv.) give a great number of examples of this use, and it is clearly stated by Liddell and Scott. Thus Xenophon, *Memorab.* i. 4, 6 τὸ δὲ τὴν ἀκοὴν δέχεσθαι μὲν πάσας φωνάς, ἐμπίπλασθαι δὲ μήποτε; Plato, *Repub.* viii. 550 D ταμιεῖον . . . χρυσίου πληρούμενον; Philostratus, *Vita Apollon.* v. 20 τὸ δ' αὐτοὺς σιτεῖσθαι τοὺς θεοὺς καὶ μὴδ' ἐμπίπλασθαι τούτου; Herodot. i. 212 ἀμπελίνῳ καρπῷ τῷ περ αὐτοὶ ἐμπιπλάμενοι μαίνεσθε; Josephus, *B. J.* i. 13, 3 (253) τά τε περὶ τὸ ἱερὸν πάντα καὶ ἡ πόλις ὅλη πλήθους τῶν ἀπὸ τῆς χώρας ἀναπίμπλαται τὸ πλεον ὀπιλιτῶν. Many other examples in which the various verbs occur could be adduced. In some cases, although the sense is perfectly clear, it is difficult to assign the verb to one or the other class of meanings; and that fact itself shows that a development of this meaning for the present and imperfect passive is almost inevitable in this group of verbs.

Of this use of the present and imperfect passive there are a number of cases in the LXX, including phrases relating to time, such as are described under (a), as well as others of dif-

ferent purport. Thus Dan. 8, 23 πληρουμένων τῶν ἁμαρτιῶν αὐτῶν; Jer. 36 (29), 10 ὅταν μέλλῃ πληροῦσθαι Βαβυλῶνι ἐβδομήκοντα ἔτη; Esther 2, 15 ἐν δὲ τῷ ἀναπληροῦσθαι τὸν χρόνον Ἑσθέρ; Sirach 14, 9 πλεονέκτου ὀφθαλμὸς οὐκ ἐμπίπλῃται μερίδι; Job 19, 22 ἀπὸ δὲ σαρκῶν μου οὐκ ἐμπίπλασθε; Prov. 24, 51 (30, 16) γῇ οὐκ ἐμπιπλάμενη ὕδατος; Habak. 2, 5 καὶ οὗτος ὡς θάνατος οὐκ ἐμπιπλάμενος; 3 Macc. 4, 3 τίνες ἀγνῖαι κοπετοῦ καὶ γόων ἐπ' αὐτοῖς οὐκ ἐνεπιπλῶντο.

In the New Testament the following instances seem clearly to have this same meaning: Acts 7, 23 ὡς δὲ ἐπληροῦτο αὐτῷ τεσσαρεκονταετῆς χρόνος; Acts 9, 23 ὡς δὲ ἐπληροῦντο ἡμέραι ἱκαναί; Acts 21, 27 ὡς δὲ ἔμελλον αἱ ἐπτὰ ἡμέραι συντελεῖσθαι. In Acts 13, 25 ὡς δὲ ἐπλήρου Ἰωάνης τὸν δρόμον, this sense, 'had finished' (shown by the examples given above to be perfectly idiomatic), yields a more forcible meaning for the passage, although the sense 'was accomplishing,' if weak, is yet not impossible. This is a case of the present active, but is of such a nature as fairly to be associated with the passive tenses here under discussion.

This idiom seems always to denote the 'completion of a period,' never the 'arrival of a moment, or date.' For this latter sense other verbs (e.g. ἦκεν, γενέσθαι) were available, and no Semitic idiom existed to cause πληρῶν, etc. to acquire such a meaning.

(c) *The subject of the verb.* The subject of the passive verb in these phrases referring to time is regularly a plural (ἡμέραι being notably frequent), or else a singular (e.g. χρόνος) denoting a continuing period of time. In the LXX no case appears where the subject is a date, or a word denoting a moment of time. Lev. 8, 33 ἕως ἡμέρα πληρωθῇ τελειώσεως ὑμῶν, sometimes adduced, would stand alone as an exception to this statement, if in fact it had this meaning. But it does not have it, for the context does not admit of the idea of a 'day of consecration' (singular), which could be thought of as 'arriving.' The only possible interpretation of the Greek sentence is to force ἡμέρα into the sense of 'period,' including the whole seven days. This may have been the translator's idea; and the actual cause of his unusual Greek is easily discovered. The Hebrew reads, 'until the day of the completion of the days of

your consecration.' The Greek translator has rendered, 'until the day be completed of your consecration,' an inaccurate abridgment, attaching itself to the singular, 'day,' which in Hebrew does not govern the genitive 'of your consecration.' A similar, but accurate, abridgment is the rendering of the King James version, "until the days of your consecration be at an end."

In the New Testament the two instances, Mk. 1, 15 *πεπληρωται ὁ καιρὸς* and Jn. 7, 8, are not exceptions, in view of the regular use of *καιρὸς* to mean a "limited portion of time."

The noun denoting time used as subject in these expressions is commonly made definite by a modifying adjective (e.g. Jer. 25, 12), or by a genitive (e.g. Lev. 12, 4), or by an epexegetical phrase. This last is in Hebrew uniformly *ל* with the infinitive, and is naturally rendered in Greek by *τοῦ* and the infinitive. Accordingly the genitive of the infinitive here is not to be taken either in Old Testament (e.g. Gen. 25, 24) or in New Testament (e.g. Lk. 1, 57) as governed by the noun of time (in the cases cited, *ἡμέραι*), but is a true appended, epexegetical clause. This is well illustrated by Jer. 32, 20 (Heb. 25, 34), where *ἐπληρώθησαν αἱ ἡμέραι ὑμῶν εἰς σφαγὴν* (תִּשְׁבֹּרֶן) correctly translates the Hebrew, while the King James version, "the days of your slaughter . . . are accomplished" does not do justice to the grammatical relation of the words (but see A. V. mg.).

Where a genitive is attached to the noun, it is always a proper characteristic of the period completed; it never denotes an event or result external to the period itself which merely closes the period, nor does it indicate the condition or situation following the period. This is the case even in Lev. 12, 4; 6 *αἱ ἡμέραι καθάρσεως αὐτῆς*, and so is to be understood Lk. 2, 22 *αἱ ἡμέραι τοῦ καθαρισμοῦ αὐτῶν*, which is clearly dependent on Lev. 12. The purifying efficiency here referred to was a property of the days themselves; they were the days in which the purification took place, not days of waiting for a later purification. The meaning in Lev. 8, 33 (Hebrew) is entirely the same.

(d) I k. 9, 51 *ἐν τῷ συμπληροῦσθαι τὰς ἡμέρας τῆς ἀναλήψεως αὐτοῦ* is often taken as if it afforded the key to the meaning of these expressions and especially of Acts 2, 1.

In fact, however, Lk. 9, 51 is itself too obscure to serve as a basis for any inference of this kind. If, as seems natural, ἀναλήμψεως means 'ascension,' 'the days of his ascension' is a strange mode of designating the period of Jesus' life either before or after his final departure from Galilee. Moreover, especially in the light of the other parallel phrases (see above under [c]), it is hard to say what 'the days of his ascension' could mean at all. The whole verse is compact with Semitisms in every part, and cannot with security be treated as if originally composed in intelligible Greek. If the usual interpretation, 'when the days which were to culminate in his ascension were drawing nigh,' be accepted, it is because the interpreter thinks that is what the author ought to have said at this point, not because this meaning is given by the words themselves in the light of other usage. Particularly is it to be remarked that from the unusual meaning thus forced upon συμπληροῦσθαι no inference can properly be drawn as to the sense of that verb in Acts 2, 1 or elsewhere.

A good illustration of the necessity of this warning may be drawn from Lam. 4, 19 (Heb. 18):

ἤγγικεν ὁ καιρὸς ἡμῶν,
ἐπληρώθησαν αἱ ἡμέραι ἡμῶν,
πᾶρεστιν ὁ καιρὸς ἡμῶν.

'Our time is near' and 'our days are accomplished' are evidently applied here to the same situation, but nevertheless it does not at all follow that if a writer had occasion to refer to the approaching time, in express distinction from the accomplished time, he would be at liberty to use at will any one of the three expressions. Together, the expressions can be used without danger of misunderstanding, for they explain one another; but when used separately they are not interchangeable. So, even if in Lk. 9, 51 συμπληροῦσθαι were held to be used (inexactly) to mean 'draw near,' that meaning could not be carried over to interpret other passages where the context does not suggest it, and where it can hardly be supposed that any contemporary reader could have recognized such a sense.

We come now to the application of all this to Acts 2, 1.

The words *ἐν τῷ συμπληροῦσθαι* mean 'on the completion of' the period of time named, and need cause no difficulty. The problem arises from the character of the phrase constituting the subject, *τὴν ἡμέραν τῆς πεντηκοστῆς* (cf. Acts 20, 16) or (perp *gig vg pesh*) *τὰς ἡμέρας τῆς πεντηκοστῆς*.

Both forms lack full parallel in writings of the Jews, or of Christians of this early period. The Feast of Weeks seems to be designated in this way in no other place which is not likely to be dependent on Acts. The regular term among Hellenistic Jews was *ἡ πεντηκοστή*; Tob. 2, 1 (B *τῇ πεντηκοστῇ ἑορτῇ*); 2 Macc. 12, 32; Josephus, *Ant.* iii. 10, 6 (252); xiv. 13, 4 (337); xvii. 10, 2 (254); *Bell. Jud.* i. 13, 3 (253); ii. 3, 1 (42); vi. 5, 3 (299). Josephus, *Ant.* xiii. 8, 4 (252), uses the expression *ἡ πεντηκοστή ἑορτή*. The nearest analogy is found in the Old Testament passages in which the phrase *ἡμέρα ἑορτῆς* (especially *ἐν ἡμέρᾳ ἑορτῆς*) occurs, Ps. 80, 4 (81, 3); Hos. 9, 5; Hos. 12, 9 (10); Zeph. 3, 17; Baruch 1, 14; Lam. 2, 7; 22. The phrase in the singular, *τὴν ἡμέραν τῆς πεντηκοστῆς*, is not in itself impossible (cf. Acts. 20, 16),⁴ but the whole clause with *συμπληροῦσθαι* can properly mean only 'at the completion of the day of Pentecost.' This happens, however, to be conclusively shown by Acts 2, 15 not to be the writer's meaning.

The translation, 'while the day of Pentecost was in progress,' while perhaps abstractly possible, is unacceptable, partly because all the associations of *συμπληροῦσθαι*, as actually used, point to the idea of completion, not to that of progress, and partly because that would not in any case be a very natural way of referring to an event in the earliest hours of the morning of the day mentioned.

Nor does the alternative reading, *τὰς ἡμέρας τῆς πεντηκοστῆς*, yield a satisfactory sense for a primitive writer, for, as noted above, 'the days of Pentecost' is a phrase without example in Old Testament or New Testament or among Hellenistic Jews,

⁴ This writer seems to display a similar tendency to refer to 'the day,' in his liking for the Old Testament phrase *ἡ ἡμέρα τοῦ σαββάτου* (*τῶν σαββάτων*) Lk. 4, 16; 13, 14; 13, 16; Acts 13, 14; 16, 13, which no other New Testament writer uses; and in his probably quite incorrect expression, *ἡ ἡμέρα τῶν ἀγύμων*, Lk. 22, 7.

and from their point of view possesses no natural meaning. The use of πεντηκοστή to denote the fifty paschal days after Easter is purely Christian and later, and there seems to be no foundation for the often repeated statement (so, e.g., Zöckler in *Prot. Realencycl.* s.v. 'Pfingsten') that it was the earlier usage, from which the application to the single day was later developed. Both Tertullian and Origen use 'Pentecost' in both senses in adjacent contexts of the same passage; Tertullian, *De bapt.* 19, cf. also *De idol.* 14, Origen, *Contra Cels.* viii. 22. The proper meaning of the phrase ἡ πεντηκοστή, as well as the uniform Hellenistic Jewish usage, make it virtually certain that the term was first used of the day of the feast, and later extended to cover the preceding seven weeks.

Thus, of the two readings one (with the singular) is unsuited to the verb, the other (with the plural) is a designation of the forty-nine days which a Greek author of the period would not have been likely to use if writing freely, and to which no known Hebrew or Aramaic usage would have guided him. The use by Origen, *Contra Cels.* viii. 22, of the phrase ταῖς ἡμέραις τῆς πεντηκοστῆς makes it probable that the reading τὰς ἡμέρας of perp gig vg pesh is a correction of the difficult τὴν ἡμέραν, made under the influence of the later Christian conception. The variant may have arisen in the Latin and Syriac independently of each other. The opposite theory, whereby τὰς ἡμέρας would have been the original, is transcriptionally unlikely, because, after Christian institutions were developed, τὰς ἡμέρας τῆς πεντηκοστῆς was an expression perfectly comprehensible and unlikely to cause any difficulty, whereas the peculiar difficulty of ἐν τῷ συμπληροῦσθαι τὴν ἡμέραν τῆς πεντηκοστῆς would have been ever increasingly apparent with advancing study of Old Testament and New Testament.

If it can be supposed that we have here a translation from Aramaic, it may well be that ἐν τῷ συμπληροῦσθαι correctly represents the original, while τὴν ἡμέραν τῆς πεντηκοστῆς, as a term more intelligible to Christians, was substituted by the translator for an Aramaic phrase which correctly described the days of the seven Weeks. This is the view of C. C. Torrey (*Composition and Date of Acts*, 1916, p. 28), who proposes

וּבְמַשְׁלֵם שְׁבֻעֵיהֶם, 'and when the Weeks were fulfilled.' At any rate, the investigation of the problem has so far yielded no other explanation which seems capable of explaining the Greek text.

III. THE GREEK TEXT OF CODEX LAUDIANUS

By reason of its romantic history the Codex Laudianus (E) of the Acts will always possess a unique interest. At some time after the year 534 it was in Sardinia, and it may well have been written in that island in the late sixth or early seventh century.⁵ The opening years of the eighth century found it in England at Jarrow, for it is unquestionably the Greek codex abundantly referred to by the Venerable Bede in his commentary on Acts.⁶ Some have supposed that it was brought from the continent by Theodore of Tarsus in 668, but in the absence of evidence that he brought any books a more sagacious conjecture would associate it with the manuscript treasures which were secured in Italy by Benedict Biscop and Ceolfrid, and came to England a few years later than the Archbishop's arrival. In the period just before 716, the Latin columns of the codex seem here and there to have guided the scribe of Codex Amiatinus in producing his famous text of the Vulgate.

At a later date Codex E was in Germany, doubtless transported thither by one of the English missionaries, Willibrord or Boniface or some one of the latter's disciples, whom Christian zeal impelled to the evangelization of Northern Europe. Its home may have been Würzburg, and it may have come to that house, like many other manuscripts, through Burchard, whom Boniface consecrated bishop of Würzburg in 741 or earlier.⁷ During the Thirty Years' War, nine hundred years

⁵ Sardinia belonged to the Byzantine empire from the middle of the sixth century; Greek monks are known to have been there in the period of the monothelite controversies of the seventh century; J. Chapman, *Notes on the Early History of the Vulgate Gospels*, 1908, p. 158.

⁶ The close relation of Codex E to Bede's Greek text was mentioned by Richard Simon, '*Dissertation critique sur les principaux actes manuscrits*,' p. 60, appended to his *Histoire critique des principaux Commentateurs du Nouveau Testament*, Rotterdam, 1693.

⁷ C. H. Turner, Art, 'New Testament, Text of,' in *Murray's Illustrated Bible Dictionary*, 1908, p. 586; A. Souter, *The Text and Canon of the New Testament*, 1913, p. 29.

later, Würzburg was among the monastic houses sacked by the Swedish army, and in that period of upheaval Archbishop Laud, then chancellor of the University of Oxford, through his agents in Germany, was buying manuscripts from the loot of monasteries. The fruit of his characteristic energy and far-sighted interest in learning was the collection of precious books which he gave to his University. From that source this ancient copy of Acts came to the Bodleian Library in 1636, and it has there found its permanent home, with the designation *Codex Laudianus* 35. Scarcely in the case of any other manuscript of an age at all approaching that of E is so much known of the varying chances of its history. The earliest use of the readings of *Codex Laudianus* is to be found in the New Testament of Bishop John Fell, Oxford, 1675.

Codex Laudianus is a quarto of moderate size (27 by 24 centimeters), written in large uncials in two columns, Latin (commonly referred to as c) and Greek (designated E), the Latin occupying the place of honor (as John Mill said, "*ordine praepostero*") on the left of each page. The codex is nearly complete, some seven or eight leaves (Acts 26, 29—28, 26) having been lost. Noteworthy is the brevity of the lines, which often contain but a single word, and rarely as many as three. The scribe seems to have known Greek better than Latin, and occasionally Greek letters are found on the Latin side. It has been shown that the manuscript was probably copied from a bilingual predecessor constructed in the same manner.⁸

In constructing the text of a bilingual MS. arranged in this fashion, it is evident that the Latin and Greek texts must usually correspond. This is true of any bilingual, but peculiarly so where the lines are very short. The situation is not far from that of a text with an interlinear translation. No two independent texts of Acts, one Latin and one Greek, even though the Latin were made from the same type of Greek text as that represented by the Greek, can be arranged in this way without some adjustment, unless the Latin were characterized by a degree of mechanical literalness almost or quite without

⁸ A. Jülicher, 'Kritische Analyse der lateinischen Übersetzungen der Apostelgeschichte,' *Zeitschrift f. d. neutestamentliche Wissenschaft*, XV, 1914, pp. 182 f.

example in such cases. There are, indeed, in E occasional divergences between the Latin and Greek, but they are confined within the narrowest limits, affect only a word or two at a time, and are not of a nature to disarrange in the least the formal equivalence of the two columns.⁹ To make the plan work at all this equivalence has to be closer than in the longer lines of Codex Bezae.

Of such differences between the Latin and Greek of Codex Laudianus a few examples may here be given. They will serve to suggest how small a part the differences play in the whole manuscript.¹⁰

2, 2	omnem	ολον
14, 17	et tempora	καιρους
15, 40	Saulus	Παυλος
16, 12	prima partis	πρωτη μερις
17, 10	abierunt	εισησαν

A complete statement for chapter 10 of all the cases that can in any wise be called differences between e and E is as follows. In vs. 20 an obvious blunder has been committed by the scribe of e.

vs. 3	visum	εν οραματι
" 4	{ et timore	{ και εν φοβω
	{ repletus	{ γενομενος
" 7	cum eo	αυτω
	ex domesticis	των οικετων
" 10	esuriret	προσπιнос
" 16	et denuo	και ευθυς
" 20	{ cum eis	{ και πορειου
	{ nihil	{ συν αυτοις
	{ nihil	{ μηδεν
" 22	testimonium autem habens	μαρτυρουμενος τε
" 30	in conspectu meo	ενωπιον
" 38	a diabolo	υπο του σατανα

⁹ Of course an occasional blunder creates a difference which was not in the exemplar, and was not intended in E e.

¹⁰ Tischendorf, in the Prolegomena to his edition of Codex Laudianus, *Monumenta sacra inedita, Nova collectio*, vol. IX, 1870, p. XVII, gives a number of other instances of difference, chiefly minor variation in conjunctions. In several of his cases the Latin e agrees with D.

In producing this harmony between the two columns it is natural to suppose that the Latin translation would ordinarily suffer adjustment to the Greek text used for the bilingual (that is, of course, for that ancestor of Codex E in which the parallel arrangement was first made). That in fact this often took place is clear. Tischendorf (pp. XVI f.) cites numerous examples of Latin solecisms and strange expressions plainly due to imitation of the Greek. Jülicher (pp. 183–185) gives other interesting and striking cases, while he remarks (p. 184) that on the other hand the Latin is for long passages an entirely satisfactory, competent, and careful translation. As he says (pp. 184, 185), a recognized Latin version, closely like that which underlies Codex Gigas and the Vulgate, and more remotely akin to that from which d had sprung, was taken as the foundation of the Latin of Codex E, and was usually altered only where it did not provide the text necessary to correspond to the Greek column. The character of these alterations leads Jülicher to the conclusion (p. 184) that the original bilingual ancestor of e E was probably the work of a man of the sixth century.

But if the agreement of Latin and Greek was effected in many places by an accommodation of the Latin translation, conversely it can be seen that the Greek text was altered in many other instances to fit the Latin. This has been observed at least since the time of Wetstein (1752; see vol. II, p. 451), although such critics as Scrivener, Gregory, and Kenyon have denied with great positiveness that "the Greek portion of this codex is Latinised."¹¹

Where the Latin text had more than the Greek, it was plainly necessary to make a translation into Greek of the excess in order to make the two columns agree. This was done with great skill by a well-educated man and a good Greek scholar,¹² and in

¹¹ Jülicher (op. cit. p. 182) speaks of the "impossibility" that the text of D or of E should anywhere have been altered to make it agree with d or e, but the whole context of his sentence raises the strong suspicion that "Unmöglichkeit" is a printer's error for 'Möglichkeit.'

¹² Zahn, *Die Urausgabe der Apostelgeschichte des Lucas*, 1916, p. 226, remarks that "der gewissenhafte und nicht ungebildete Schreiber den Lc in einem anständigen, eines solchen Schriftstellers würdigen Gewand vor den Leser treten lässt, recht im

many of the simpler phrases the Greek was so inevitable that the retranslation could hardly help agreeing with the original Greek text. In a number of instances, however, the difference of his translation from other extant Greek for the same passage betrays what has happened. The examples given in the table below (page 180) comprise nearly all the convincing instances mentioned by Wetstein, Tischendorf, Chase,¹³ Blass,¹⁴ and Nestle,¹⁵ together with a few newly observed.

All the readings of E in the table are instances of addition to the ordinary text. In many of them the addition is found in nearly or quite the same form in other Old-Latin copies besides e and d, so that it is clearly not a mere idiosyncrasy of Codex Laudianus. The form of these readings seems to show conclusively that their Greek is due to a new translation from the Latin; hence its disagreement with the other (and presumably original) Greek form of the added words.

Similar evidence of retranslation is to be found in the following readings, which are not additions to the ordinary text but actual variant words. In both passages the variation appears due to the Latin, and the Greek to be a mere imitation of the Latin reading.

e	E	
6, 7 discentium	των μαθητων	all others των μαθητων
12, 14 januam	την θυραν	" " τον πυλωνα

The recognizable and convincing instances of this latter type are naturally fewer than the additions, where retranslation was probably the only available means of getting any Greek text, but 6, 7 των μαθητων is a decisive piece of evidence.

In most similar cases the variation might, in itself considered, have had its original seat equally well in the Greek or the Latin text. Both Latinizing and Grecizing actually took place; ordinarily we cannot tell by inspection which is to be

Gegensatz zu dem unsauberen, ohne Geschmack und ohne ernstes Nachdenken aus allerlei verschiedenfarbigen Lappen zusammengeeffickten Anzug, in welchen Dd die AG und ihren Verfasser gekleidet hat."

¹³ The Old Syriac Element in the Text of Codex Bezae, 1893, pp. 132-138.

¹⁴ Acta apostolorum, 1895, pp. 28 f.

¹⁵ Philologica Sacra, 1896, pp. 43-45.

e	E	
2, 14 prior	προτερον	D πρωτος
3, 13 in iudicium	εις κριτηριον	D εις κρισιν
4, 32 et non erat separatio in eis ulla	και ουκ ην χωρισμος εν αυτοις τις	D και ουκ ην διακρισις εν αυτοις ουδεμια
5, 12 in templo congregati	εν τω ναω συνηγμενοι	D min εν τω ιερω
5, 15 et liberarentur ab omni valitudine quam habebant	και ρυσθωσιν απο πασης ασθενιας ης ειχον	D απηλλασσοντο γαρ απο πασης ασθενιας ως ειχεν εκαστος αυτων
5, 38 non coinquantes manus vestras	μη μολυνοντιεσ τας χειρας υμων	D μη μιαναντες τας χειρας
5, 39 neque vos neque magistratus vestri	ουτε υμεις ουτε οι αρχοντες υμων	D ουτε υμεις ουτε βασιλεις ουτε τυραννοι
6, 10 propter quod redarguerentur ab eo cum omne fiducia: cum ergo non possent contradicere veritati	διοτι ηλεγχοντο υπ αυτου μετα πασης παρρησιας· επιδη ουκ ηδυναντο αντιλεγιν τη αληθεια	D δια το ελεγχεσθαι αυτους επ αυτου μετα πασης παρρησιας· μη δυναμενοι ου<ν> ανταφθαλμειν τη αληθεια
7, 21 in flumen	εις τον ποταμον	D minn παρα τον ποταμον
8, 37 dixit autem ei philippus: si credis ex toto corde suscepis (c ^{corr} saluus eris). respondens autem dixit: credo in christum filium dei	ειπεν δε αυτω ο φιλιππος· εαν πιστευεις εξ ολης της καρδιας σου σωθησει. αποκριθεις δε ειπεν· πιστευω εις τον χν τον υιον του θυ	ς ειπε δε ο φιλιππος· ει πιστευεις εξ ολης της καρδιας εξεεστιν. αποκριθεις δε ειπε· πιστευω τον υιον του θεου ειναι τον ιησουν χριστον
10, 41 per dies quadraginta	δι ημερων τεσσαρακοντα	D ημερας μ
13, 6 quod interpretatur elymas	ο μεθερμηνευεται ελυμας	gig Lucif vg.codd, quod interpretatur paratus
13, 8 quoniam libenter eorum audiebat	οτι ηδεως αυτων ηκουεν	D επιδη ηδιστα ηκουεν αυτων
13, 44 factum est autem per universam civitatem diffamari verbum	εγενετο δε κατα πασαν πολιν φημισθηναι τον λογον	D εγενετο δε καθ ολης της πολεως διελθειν τον λογον του θυ
14, 2 deus autem pacem fecit	ο δε θς ειρηνην εποιησεν	D ο δε κς εδωκεν ταχυ ειρηνην
14, 7 et commota est omnis multitudo in doctrina eorum. paulum autem et barnabas morabantur in lystris	και εξεπλησσετο πασα η πολυπληθεια επι τη διδαχη αυτων. ο δε παυλος και βαρναβας διετριβον εν λυστροις	D και εκεινηθη ολον το πληθος επι τη διδαχη· ο δε παυλος και βαρναβας διετριβον εν λυστροις

assumed in a given instance. But the two lists printed above seem to consist of unmistakable Latinizations,¹⁶ and there is every reason to suppose that they are not the only examples of this process, whether we can surely detect others or not.

It is now time to turn to the Greek text of Codex E, and the problem of its character, for the consideration of which the above remarks form the necessary preparation. The statements under this head in the books are usually guarded;¹⁷ Kenyon's characterization of it as "of considerable value" may be taken as an example. The judgment of Hort (Introduction, p. 153) is carefully framed, and has doubtless exerted wide influence on opinion:

A Western text it [Codex Laudianus] does contain, very distinctly such, though evidently later than that of D; but mixed on apparently equal terms, though in varying proportions, with a no less distinctly Alexandrian text: there are also Syrian readings, but they are fewer in number.

But the common view of Codex E, as seen in the ordinary use of its readings in discussions of the text, is that it gives in large measure a true Greek "Western" text, which may be cited with confidence alongside of D and the mixed Greek minuscules, like the Milan codex (614, formerly 137). The collocation "Dd Ee" is familiar to all who have studied critical apparatus. Thus von Soden, although he states (p. 1687) that three pairs of manuscripts which support the text I^a, are superior to E, regularly combines D and E together as "δ5f." Blass, however, both in his larger commentary (pp. 28 f.) and in his small edition of the text (p. XXI), expresses a different opinion, to the effect that E is largely not "Western," and that its text

¹⁶ Such Latin influence on the Greek text must be admitted in certain cases in Codex Bezae (for instance 2, 11 *απαβοι*; 16, 12 *κεφαλη*), even by those who do not accept Rendel Harris's far-reaching contentions. Of Codex G (Boernerianus) of Paul E. Diehl, *Zeitschrift f. d. neutestamentliche Wissenschaft*, XX, 1921, p. 107, writes: "Die Vergewaltigung des griechischen Textes durch den Lateiner in G ist so offenkundig, dass, wo immer G als einziger Grieche mit dem Lt. übereinstimmt, die lateinische Lesart als aus dem Griechischen nicht bezeugt zu gelten hat."

¹⁷ It may be observed in passing that Gregory's statement, *Prolegomena*, p. 411, footnote, that the Greek codex 218 (now 1522; e^{scr}; a464) has a text like that of E, is not borne out by a closer examination; but see Scrivener, *An Exact Transcript of the Codex Augiensis*, pp. lviii f.

is not of great moment. That he is right appears from an examination of the text itself.

From such an examination our conclusions are as follows:

1. The Greek text of E is chiefly a combination of readings found in B \aleph A C 81 (that is, the "Neutral" and "Alexandrian" texts) with others belonging to the "Antiochian" ("Syrian") text, as shown in H L P and excellent minuscule representatives. It ought thus to be classed with the numerous mixed codices which make up the supporters of von Soden's H-text. The impression that E shows a large "Western" element is due to the failure to observe that the agreement between E and D is nearly always accompanied by a further agreement either with at least one of the old uncials (B \aleph A C 81)¹⁸ or with the Antiochian text. In these cases there can be no assurance that the Greek text of E was derived in any degree from an exemplar essentially different from a non-western uncial of one or the other of the two types, older and later.

2. The readings of E not thus accounted for are relatively few in number. In nearly every instance they correspond with the Latin renderings of e, and the facts brought out above lead in many of these instances, and in most cases of "Western" additions, to the suspicion that the "Western" character ordinarily claimed for E is due to the retranslation of "Western" readings in e which had themselves been present in the Latin text of Acts, perhaps from as far back as the earliest African Latin translation from the Greek. In some cases agreement of such "Western" readings in E with those Greek minuscules which contain sporadic "Western" elements may justify the conclusion that the reading of E has been derived from a Greek source (so, for instance, in Acts 24, 6-8), but such sporadic "Western" readings are to be found (as in the case just men-

¹⁸ Codex 81 (formerly 61^{ae}; $\alpha 162$; p^{ae}), while of course a minuscule, contains a text which approves itself in Acts as at least equally true to type with any of the old uncials, and it may properly be treated for practical purposes as one of them; see Hort, Introduction, p. 154. In fact, Codex 81 probably furnishes a better example of the standard Alexandrian text than any of the four uncials (B \aleph A C), for it shows fewer peculiar and erratic readings. It rarely stands by itself in the group, except where it shows (as do also A and C, and in less degree \aleph) Antiochian influence.

tioned) even in the *Textus Receptus*, and do not justify the application of the name "Western" to a manuscript containing them. The important point is that the existence of readings of this sort in E does not entitle us to treat other peculiar readings of the same codex, where no parallel Greek evidence (apart from D) is at hand, as survivals of the *Greek* "Western" text. They are probably only evidence for the Latin "Western" text from which they came into E.

Here are some representative facts. If we take chapters 14 and 15 of Acts, we have the following figures: ¹⁹

E departs from old-uncial group	70 times
Of these E agrees with Antiochian text	27 times
	<hr/> 43

Of this remainder of 43 readings, which are derived neither from the old-uncial text nor from the Antiochian, E agrees completely with D only 7 times, and incompletely only 6 times more. Now in the two chapters the specific Antiochian readings, in which the Antiochian wholly departs from all five codices of the old uncial group, are only 43 in number, and only 17 more occur where it departs from all but one of the group. That is to say, where the Antiochian departs from all the old uncials, E follows the Antiochian two-thirds of the time. Where the Antiochian departs from all but one of the old uncials, E follows it nearly always. On the other hand, if we may accept D as affording an approximate idea of the "Western" text, E departs from the "Western" text nearly 200 times. In view of these figures Hort's statement, quoted above, about the number of Syrian readings in E seems hardly adequate. It is the only sentence I know relating to textual criticism from the pen of that wise and trustworthy scholar which puts the reader distinctly on the wrong track.

It may be well to add that of the 70 cases in chapters 14 and

¹⁹ The figures stated in these investigations cannot be guaranteed as more than approximate, but they are very nearly accurate, and the margin of possible error does not affect their value for the purposes for which they are employed. Mere variations of spelling have been neglected.

15 where E departs from the old-uncial group, only three (one an obvious lapsus pennae) show a positive difference between e and E.

An examination of other parts of E yields a similar result. Thus for chapter 18 the list of readings where E is in agreement with neither Codex B nor the Antiochian text is as follows:

- 18, 2 δία] + δε
- 6 προς αυτοις] αυτοις
- 7 τιτου ιουστου
- 10 οη σοι
- 19 αυτου] εκει
- 26 θεου] κυριου
- 27 εις την αχαιαν διελθειν
- 28 κατηλεγχετο
δημοσια] + και κατ οικον
οη τον before χριστον

Of these readings only two are shared with D; in only one (vs. 6, αυτοις) does e fail to support E.

An analysis made of the readings of E in chapters 1 and 2 and in chapter 12 yields a similar result.

The element in Codex Laudianus which cannot be accounted for from either of the two texts (old-uncial and Antiochian) from which E is mainly derived is thus relatively small. It is doubtless drawn in part from the peculiar readings of the special types of old-uncial and Antiochian codices to which E owes its origin; but although these peculiar readings may sometimes, or often, be of "Western" origin, that, as has been said above, does not suffice to make E a witness to the "Western" text. By itself E is incapable of teaching us what the "Western" text was; only when some outside source offers convincing proof, can we recognize any reading of E as "Western." And the use even of this small element of the text as a guide to the Greek forbears of E is vitiated by the constant possibility that any given strange reading may be merely due to a retranslation from the Latin column.

In a word, the more striking Greek "Western" readings of Codex Laudianus are due to the presence, in the Latin text used, of "Western" additions which had to be translated into Greek in order to fill out the Greek column of the manuscript (or, rather, of its exemplar). These new translations often betray their origin by differing notably in form from their Greek counterparts in Codex Bezae, but they constitute the chief, if not the sole, ground for the common impression about the manuscript (and for Hort's statement) that the text of E contains a distinct "Western" element. The agreements of E with D in other, single, readings are far less numerous than is often supposed, and most of them occur in cases where D and the old uncials are in agreement, so that such readings plainly have no claim to distinctively "Western" character, but merely testify to the sound, ancient text which forms one of the two original components of the text of E.

It thus appears that not much is to be learned from the Greek text of Codex Laudianus, and that, as a means of bringing us nearer either to the old-uncial text or to the "Western" text, its readings are hardly worth including in a textual apparatus. With the Latin text of e the case is quite different, for that is a significant member of a group of representatives of a highly important recension of the Latin New Testament.

And yet the Greek of Codex Laudianus does render the textual critic one service. The origin and history of the Antiochian text constitutes an important problem, which must be worked out if the whole problem of the textual criticism of the New Testament is to be perfectly solved. The earliest extant manuscripts of Acts containing the characteristic Antiochian text as a whole are uncials of the ninth century, far removed in date from the fourth century, in which the Antiochian text is believed to have had its origin; and we crave light on the intervening period. One leaf of a palimpsest with an unmistakably Antiochian text of Acts was found in the Genizah at Cairo, and dates from the sixth century.²⁰ Codex Laudianus is certainly almost

²⁰ C. Taylor, *Hebrew-Greek Cairo Genizah Palimpsests* from the Taylor-Schechter Collection, 1900, p. 94.

as old as that, and in its composition the Antiochian ingredient is strong. It is a strange conclusion, in view of the general repute and frequent use of Codex Laudianus as "Western," but nevertheless it seems to be the fact, that the Greek text of E owes its chief importance to being the most ancient Greek copy of the Book of Acts extant which contains so large a proportion of Antiochian readings that it can be treated as a witness (though a mixed one) to the Antiochian text.²¹

²¹ For other illustrations of the several types of reading to be found in E see the elaborate analysis and lists in Von Soden, *Die Schriften des Neuen Testaments*, I. Teil, 3. Abteilung, pp. 1709, 1717-1720, 1811-1814.

A NEW COLLECTION OF "ACTA CONCILIORUM OECUMENICORUM": AN APPEAL

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IN 1901-1906 the publishing office of Hubert Welter in Paris issued a new edition of the well-known "*Sacrorum conciliorum nova et amplissima collectio*," edited in 1759-1798 by J. D. Mansi. This "new Mansi" is a mere reprint, which allowed no correction or enlargement of Mansi's text, the pages being reproduced almost photographically. Did the publisher of this reprinted Mansi and his advisers give a "*testimonium paupertatis*" to modern scholars, by thus reproducing a collection which appeared one hundred and fifty years ago? Not in the least. The modern manner of editing ancient texts was rather recognized than disregarded by assuming that a really new edition of Mansi's collection was impossible. It was indeed quite impossible; for while all scholars who have made use of Mansi's collection have perceived its defects, yet at the same time they have seen that to correct them would require more time than can be spent on a new edition.

Mansi's collection has two chief defects. The first lies in its texts. Of all collections of *Acta Conciliorum* only the first (edited 1523 by J. Merlin), the Roman edition of 1608-1612, and the "*Nova collectio conciliorum*" of Stephen Baluze (Paris, 1683) printed all their texts from manuscripts. Manuscripts were studied, of course, by the later editors, who made use of them especially in preparing the additions which they gave; but the greater part of their texts were reprinted from the earlier collections. Mansi's collection is famous as the last and the richest of all (39 volumes folio), but it is not better than the others which followed the Roman collection, and is far from absolving the task. Modern editors cannot dispense themselves from the duty of collecting and examining the manu-

scripts as completely as possible, and of reconstructing the texts with the utmost exactness.

The second serious defect in Mansi is common to all printed collections without exception. The student can seldom discover from what manuscripts the texts are taken; and when, as is generally the case, a series of documents is given, the order in which these stand in the manuscripts is not made clear, being altered by chronological reflections. Modern scholarship, especially since the famous work of F. Maassen (*"Geschichte der Quellen und der Literatur des canonischen Rechts im Abendlande bis zum Ausgange des Mittelalters,"* Graz, 1870), is interested not only in the isolated texts, but also in the order in which they are found in the ancient manuscript collections. We have learned how much profit is to be gained for history itself by analyzing and exploring these collections. The task of correcting this second defect of Mansi's collection is a very intricate and extensive one, and every competent judge will understand that even a Nestor's life, nay ten lives of ten co-operators reaching the second limit of the ninetieth psalm, would not suffice for the duty of a modern editor with regard to all the texts and all the collections printed by Mansi. This was acknowledged in practice when Mansi's *"Collectio conciliorum"* was republished in a mechanical reprint.

Beyond all doubt, however, the new Mansi is not what modern study of the councils requires. And since the whole work, namely a new edition of all *"Acta conciliorum,"* is impossible, that part which is possible must be done; that is, the acts of single councils, or of coherent series of councils, must be edited one after another with all the accuracy required by the modern scientific conscience.

Now among the acts of councils none are of greater historical importance and more universal religious interest to scholars of all confessions than those of the oecumenical councils of the ancient church. To make a new edition of these acts is not at all an easy task, but it is not so extensive a one as might seem at first sight. For the "acts" of the first oecumenical council probably never comprised more than its creed and its canons, together with the list of the members and the

official letters of the synod (minutes, as it seems, not having been taken); and the minutes of the so-called second oecumenical council, which, as I think, once existed, have not been preserved for posterity. Only for the succeeding councils do the minutes, or parts of the minutes, still exist, accompanied in the "acts" of our manuscripts by letters, addresses, and resolutions belonging to the councils or relating to the subject of their proceedings. On the other hand, a critical edition of these oldest "Acta conciliorum," has its own great difficulties in the case of all these councils, although in different ways in the several cases. The very first of these, the Ephesian council of 431, involves more difficulties than the others, the acts of this council being of an exceedingly intricate sort. For as this "holy third oecumenical council" was actually divided into two opposing synods, that of Cyril and his party and that of the Antiochians, one single collection of its minutes and documents never existed, but from the beginning there were two; and documents of different origin were often intermingled in the manuscripts, documents of the one collection being omitted and documents of the other added. The whole of the Antiochian form of the acts is irreparably lost; only for the Cyrillian synod are minutes preserved, and these in a very scanty form, combined with a varying number of documents. Mansi's "Collectio conciliorum" offers only that form of these Ephesian acts which is preserved in a single class of manuscripts and printed in the earlier editions, together with a further Latin collection containing many documents of Antiochian origin. A modern editor has here to disentangle a very complicated manuscript tradition, for he must enable his readers to survey all the forms of collections existing in the manuscripts, and moreover must print all the extant documents in such a manner that their place in the manuscripts from which they are taken is clearly recognizable. Only after long labor of collection and comparison of manuscripts can all this be done. For the acts of the later councils the editor's task is less intricate. Even that work, however, can be performed only by a scholar with adequate palaeographical and philological knowledge in both Greek and Latin, occasionally also in Syriac, and by one who

is at the same time familiar with the history of the ancient church in all its branches.

Therefore the "Wissenschaftliche Gesellschaft in Strassburg" (transferred to Heidelberg after the war), when projecting in 1909 a new edition of "*Acta conciliorum oecumenicorum*," was fortunate to secure an editor competent and courageous enough to perform the task in Professor Eduard Schwartz, then at Freiburg, in 1897-1902 at Strassburg, and now at Munich. Indeed, the Society would never have planned so vast and difficult an undertaking, if this scholar had not been one of its members. If anyone in the world is equal to the task, it is Dr. Schwartz, for he is not only one of our best philologists, but has proved himself also an eminent expert in chronology and in the history of the ancient church and its ecclesiastical law. Evidence of this is given by his studies, "*Zur Geschichte des Athanasius*" (*Nachrichten der königl. Gesellschaft der Wissenschaften zu Göttingen, philologisch-historische Klasse*, 1904, 1905, 1908, 1911); by his admirable work, "*Christliche und jüdische Ostertafeln*" (*Abhandlungen der kgl. Gesellschaft der Wissenschaften zu Göttingen*, VIII, 1905, No. 6); by his article, "*Eusebios von Caesarea*" (*Pauly-Wissowa, Real-Encyclopädie*, VI, 1, 1907); by his paper, "*Über die pseudoapostolischen Kirchenordnungen*" (*Schriften der Wissenschaftlichen Gesellschaft in Strassburg*, No. 6, 1910); by his "*Kaiser Constantin und die christliche Kirche*" (Leipzig, 1913); by his "*Konzilstudien*" (*Schriften der Wissenschaftlichen Gesellschaft in Strassburg*, Heft 20, 1914); and by different treatises from his pen in various journals, such as the essays, "*Johannes Rufus, ein monophysitischer Schriftsteller*" (*Sitzungsberichte der Heidelberger Akademie der Wissenschaften, philos.-histor. Kl.* 1912, Abhandlung 16); "*Zur Vorgeschichte des Ephesinischen Konzils*" (*Historische Zeitschrift*, Band 112, 1914, pp. 237-263); "*Über die Reichskonzilien von Theodosius bis Justinian*" (*Zeitschrift der Savigny-Stiftung für Rechtsgeschichte*, XLII, kan. Abt., XI, 1921, pp. 208-254); and (the last fruit of his indefatigable research) the essays, "*Die sogenannten Gegenanthesismen des Nestorius*," and "*Zur Schriftstellerei Theodoret's*" (*Sitzungsberichte der Bayerischen Akademie der*

Wissenschaften, philos.-philolog. und historische Klasse, 1922, Abhandlung 1).

More than thirteen years have elapsed since the Strassburg Society resolved to bring out this new edition of "Acta conciliorum oecumenicorum." The earliest volume (IV, 2; see below) was issued in 1914. Then the war interrupted the preparation of further volumes. At its close Dr. Schwartz resumed his work with intensity. In 1914, with the initial volume, a plan of the whole was issued, promising more than "Acta conciliorum." Rightly considering that the different councils are linked to one another not only by the nature of the questions discussed and by the course of events, but also by contemporary collections of letters, addresses, and similar documents relating to their proceedings, the Strassburg Society had resolved to combine the edition of these latter collections with that of the Acts. Eight "tomes" were projected:

Tomus I. Concilium Ephesinum anni 431.

Vol. 1: Acta graeca.

Vol. 2: Acta latina collectionis Veronensis (Maassen, § 739-741).

Vol. 3: Acta latina collectionis Turonensis (Maassen, § 735-738).

Vol. 4: Synodicon Casinense (Maassen, § 745-746).

Vol. 5: Marius Mercator (now formulated otherwise, see below).

Tomus II. Concilium Chalcedonense.

Vol. 1: Acta graeca.

Vol. 2: Versiones latinae antiquissimae.

Vol. 3: Versio antiqua.

Vol. 4: Versio a Rustico correcta (Maassen, § 755-761).

Vol. 5: Codex encyclius (Maassen, § 762-765). Collectiones epistularum et libellorum de schismate Acaciano (Maassen, § 777-778).

Vol. 6 (now abandoned): Collectiones epistularum Leonis papae, quae ad haeresim Eutychanam pertinent.

Tomus III. Collectio contra Monophysitas et Origenistas destinata. Insunt acta synodorum Constantinopolitanae et Hierosolymitanae anni 536 (Maassen, § 766-768).

Tomus IV. Concilium Constantinopolitanum anni 553.

Vol. 1: Acta concilii.

Vol. 2: Johannis Maxentii libelli. Collectio codicis Novariensis XXX. Collectio codicis Parisini 1682. Proclitomus ad Armenios. Johannis papae II epistula ad viros illustres.

Tomus V. Concilium Constantinopolitanum anni 680–681.

Vol. 1: Acta graeca.

Vol. 2: Acta latina.

Vol. 3: Synodus Lateranensis anni 649.

Tomus VI. Concilium Nicaenum alterum.

Vol. 1: Acta graeca.

Vol. 2.: Versio Anastasii bibliothecarii.

Tomus VII. Concilium Constantinopolitanum anni 869 (the eighth oecumenical council according to Roman Catholic reckoning, but not acknowledged by the Greek Church).

Tomus VIII. Concilium Constantinopolitanum anni 879 (closely connected with the former and highly esteemed by the Greek church, although not as oecumenical, but condemned by the Roman Church).

The initial volume (tom. IV, vol. 2) appeared in 1914, but in spite of its splendid form and great value to scholars, it was not the happiest possible inauguration of the undertaking. The texts here given are, indeed, important as illustrating the antecedents of the fifth council, and the works of Maxentius were now printed for the first time in a critical edition (the only existing manuscript having been newly recovered); nevertheless the volume, containing no text hitherto entirely unknown, was not one of those which scholars most eagerly awaited, for their main interest lies rather in the first tome with its five volumes. How much is to be expected from these volumes relating to the Ephesian council of 431, Dr. Schwartz showed two years ago in a paper, "Neue Aktenstücke zum ephesinischen Konzil von 431" (Abhandlungen der Bayerischen Akademie der Wissenschaften, philosophisch-philologische und historische Klasse, Band XXX, Abhandlung 8, Munich, 1920). Two points in this essay are especially remarkable. First, the announcement of the recent discovery at

Athens (by Professor A. Ehrhard) of a manuscript of the Ephesian acts, communicated in photographs to Dr. Schwartz early in 1914. This manuscript is not an old one (saec. XIII), but it contains about forty-five documents, a relatively large number, hitherto either completely unknown, or not known in their Greek text. Dr. Schwartz has made a preliminary publication of these texts in his paper, and will give a fuller edition of them in Tome I, 1 of the "*Acta conciliorum.*" The second point of interest is that in this paper Dr. Schwartz has been able to classify the manuscripts of the Ephesian acts. Setting apart the varying additions, found in most of the manuscripts, he distinguishes three collections: a larger one preserved in cod. Vatic. 830 (and its copies), and two collections of less extent, namely, that found in the cod. Atheniensis (A) and that designated as S, contained in cod. Coislin. 32, olim Seguirianus, and some other manuscripts. Similar to the collections A and S (particularly to the latter) is the Latin collection of cod. Paris. 1572, olim Turonensis, published by Baluze (unfortunately in combination with documents of other origin). Besides this "*Collectio Turonensis,*" two other Latin collections (partly more or less akin to that of Tours) are extant: "*Collectio Veronensis*" and the so-called "*Synodicon Casinense.*" The latter, imperfectly edited by Christian Lupus (Louvain, 1673) and in the "*Nova collectio*" of Stephen Baluze, is of great interest because it combines with the "*Collectio Turonensis*" many documents of Antiochian origin. In thus distinguishing various collections and in insisting upon the necessity of printing these collections in their proper order, Dr. Schwartz does not follow a barren notion of scholarly exactness, as may be made plain by two observations. In 1914, as we have seen, Tome I, vol. 5 was announced as to contain "*Marius Mercator.*" Meanwhile, however, Dr. Schwartz examined thoroughly cod. Paris. 234, an ancient copy of which, now lost, had been used by Joh. Garnier in editing "*Marius Mercator*" in 1673, while Stephen Baluze in his edition of the same author (1684) based his text on a modern copy. In examining the Paris manuscript, Dr. Schwartz observed that in it the works, or certain works, of Marius Mercator are only a

part of the contents, the rest showing clearly that the manuscript is a collection compiled in the sixth century. Thus the name of Marius Mercator has to be withdrawn from nearly half the works or translations hitherto ascribed to him, while a new source is gained, useful for the history of the sixth century. Therefore an announcement of the "*Acta conciliorum oecumenicorum*," newly issued in 1922 by the publishers (*Vereinigung wissenschaftlicher Verleger, Berlin*), mentions Tome I, 5 as comprising "*Collectiones Palatina [partly by Marius Mercator] et Sichardiana*" (cf. E. Schwartz, *Konzilstudien*, pp. 57 f.). The second observation is of more general interest. Studying the various collections of Ephesian *acta*, Dr. Schwartz has become convinced, and in his above mentioned paper, "*Neue Aktenstücke*," he convinces his readers, that the "*Acta concilii Ephesini*" in their most original forms did not come into existence by the insertion of letters, addresses, etc., into a copy of the minutes drawn up at the council, but by the addition of the minutes, or parts of them, to documents of party interest, so that those collections, far from being composed in order to illustrate history, are to be regarded as closely connected with church politics, being themselves the product of controversial activity. The same observation, although not, as I think, to the same extent, is to be made respecting the "*Acta Chalcedonensia*."

In this way the "*Acta conciliorum oecumenicorum*" are becoming sources of church-history not only as reports of events of an earlier period, but also for the very days of their origin. Such importance, however, can only be attributed to the "*Acta conciliorum*" when they have been edited with such accuracy as Dr. Schwartz will employ, and already has employed, in his edition. It is, therefore, of vital interest for church history, that the great, nay stupendous, undertaking of Dr. Schwartz should be accomplished, at least to the extent of the first four tomes. Tome V and Tome VI are perhaps not so necessary, and Tome VII and Tome VIII might be called superfluous, so far as this series is concerned.

And so I come to the proper intention of these lines. After the war, in consideration of the high price of paper and printing,

the publishers at first despaired of continuing the projected work. For more than a year it was doubtful whether all Dr. Schwartz's work had not been in vain, or at least whether it could be made available in our time. But the publishers have bravely resolved to carry out the plan, and parts of Tome I, vol. 4 have recently been printed and published. Many other volumes are so far completed that the press will not become idle for want of manuscript — if only the volumes can be sold. An appeal is made to all who are interested in church history and in the history of the later Roman empire. Each subscription, to be made through booksellers or directly to the "Vereinigung wissenschaftlicher Verleger," Geuthinerstrasse 38, Berlin W 10, will be a real assistance.

After the great war few things remain in our troubled world to which genuine international esteem and interest attach; but one such, perhaps the only one, is knowledge and all that can promote it.

NOTES

'ΕΜΒΡΙΜΗΣΑΜΕΝΟΣ AND 'ΟΡΓΙΣΘΕΙΣ, MARK 1, 40-43

The interpretation of these verses and the textual problem which they involve has long been disputed among critics. With the ordinary text the difficulty begins with the word *ἐμβριμησάμενος* in vs. 43. It means 'scolding,' or 'rebuking,' and no reason can be seen for Jesus' adopting this attitude towards the man whom he had just healed. The matter becomes even more complicated if the variant readings in verse 41 be considered. The ordinary texts read *σπλαγχνισθείς*, 'having compassion on him,' but one of the earliest, Codex Bezae, reads *ὀργισθείς*, 'being angry with him,' or perhaps more accurately, 'being in a passion,' although nothing in the story explains why Jesus should have been in a passion with the unfortunate leper. With this agree several old Latin codices.¹ It seems probable that *ὀργισθείς* is the original reading; it certainly is "hard," and there was no reason why *σπλαγχνισθείς* should be changed to it, though the reverse change is not difficult to understand. Perhaps the explanation can be found in the punctuation. I suggest that it should be punctuated and translated as follows: 'And there came to him a leper beseeching him and kneeling and saying to him, If thou wilt, thou canst make me clean; and he [the leper] put out his hand in a passion of rage and touched him. And he [Jesus] said, I will, be thou clean. And immediately the leprosy departed from him and he was clean. And he rebuked him and immediately drove him out.'

A sudden access of rage on the part of a leper, struck by the misery and impossibility of his situation, is comprehensible, and the touching of Jesus would be a not unnatural expression of such passion. To touch anyone was the one thing expressly forbidden to lepers. A similar impulse is brought out with great skill in Rudyard Kipling's story, entitled "The Mark of the Beast."

¹ The reference in von Soden's apparatus to *ὀργισθείς* as occurring in Tatian (Ephrem's commentary) seems to be due to a mistake. The language of Ephrem is fully accounted for by *ἐμβριμησάμενος*, and does not imply that the Diatessaron read *ὀργισθείς* for *σπλαγχνισθείς*. But see J. R. Harris, *Expositor*, October 1922, pp. 259-261.

But to a later generation of readers the natural reference of 'touched him' would be to the healing touch of Jesus. The phrase once misinterpreted, it was natural to change *ὀργισθεῖς*, which had now no meaning, into *σπλαγχνισθεῖς*. That done, *ἐμβριμησάμενος* loses all force, whereas with the interpretation now suggested it is the natural rebuke of Jesus for the leper's unwarrantable act in a moment of passion. It is obvious that in any case the change of reference in the 'he' and the 'him' is obscure, but it is also clear that the change of subject has to be made somewhere in this long and inartistic sentence. To make the sense plain, the latest manuscripts insert the name of Jesus before *σπλαγχνισθεῖς*, but this is undoubtedly an emendation of late date. It is far more likely that the real change of subject comes, as suggested above, with *λέγει* in vs. 41.

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THE DATE OF THE ACTS OF PHILEAS AND PHILOROMUS

The Acts of Phileas and Philoromus are often cited among the more authentic documents which we possess for the persecution of Diocletian. As such they are included in Ruinart's "*Acta martyrum sincera*" and Knopf's "*Ausgewählte Märtyrerakten.*" Delehaye¹ classes them with his third group of hagiographic sources, that is, with those accounts which are drawn either from the *procès-verbaux* or from the reports of eyewitnesses. Harnack,² Tillemont,³ Allard,⁴ Le Blant,⁵ and Mason⁶ are likewise convinced of their historical credibility. On the contrary, Schmidt,⁷ Holl,⁸ and Schwartz⁹ are agreed in rejecting them: the first, without any serious proof; the second, on the negligible ground that one or two stock phrases are

¹ *Légendes hagiographiques*, 2. ed., Bruxelles, 1906, p. 137.

² *Die Chronologie der altchristlichen Litteratur*, Leipzig, 1904, II. 2, p. 70.

³ *Mémoires pour servir à l'histoire ecclésiastique des six premiers siècles*, V, Bruxelles, 1732, p. 206.

⁴ *La persécution de Dioclétien et le triomphe de l'église*, II, Paris, 1908, p. 105, note 3.

⁵ *Note sur les actes de S. Philéas*, in *Nuovo Bullettino di archeologia cristiana*, II, 1896, pp. 27-33.

⁶ *The Persecution of Diocletian*, London, 1876, pp. 290-294; *The Historic Martyrs of the Primitive Church*, London, 1905, pp. 318-323.

⁷ *Texte und Untersuchungen*, N. F., V, p. 22.

⁸ *Neue Jahrbücher f. d. klassische Altertum*, 1914, pp. 537 f.

⁹ *Göttinger Nachrichten*, phil.-hist. Klasse, 1905, p. 176, note 2.

repeated which are common to other Acta; and the third, for the more serious reason that he believes them to contain extracts from Rufinus's translation of Eusebius's Church History. This appears to be the view of Duchesne¹⁰ also, for he writes: "*La passion des saints Philéas et Philorome . . . peut avoir été retouchée çà et là d'après Rufin, mais elle contient de bonnes parties.*" The opposite of this, however, seems to be the case, namely, that the tradition of the Latin Acts of Phileas and Philoromus antedates Rufinus, and consequently that the passage in Rufinus is dependent upon these Acts.¹¹ Moreover Eusebius's Church History¹² admirably supplements and corroborates the specific data of the Acts, thus affording a substantial reason for accepting as historical the greater part of their contents. Perhaps the most judicious procedure would be to observe the rule which Delehaye¹³ has formulated for the criticism of epic Passions, namely, to accept as historically authentic the more original and personal sections (such as the dialogue and the facts of the persecution), but to be extremely circumspect regarding the commonplaces.

The historical facts to be gleaned from the Acta and from Eusebius are as follows. The two martyrs, Phileas and Philoromus, were of noble and wealthy Egyptian families; the former, a well-known bishop of Thmuis (lower Egypt), is likewise known to us through a pastoral letter on the then current persecution preserved in Eusebius's Church History¹⁴ — in courage, nobility of spirit, and dignity of speech a parallel to the pastoral exhortations of Cardinal Mercier to his suffering co-religionists in Belgium during the late war. This Phileas, Eusebius informs us,¹⁵ was notable for his excellent education, his great wealth, and his wide and enthusiastic knowledge of philosophy. In the Acta he engages in a spirited dialogue with the Egyptian prefect, Culcian, who seems to have had a certain acquaintance with pagan polemical literature — rather with the "True Word" of Celsus than with Porphyry, "Against the Christians," I should judge. Culcian and Phileas discuss an amazing range of subjects — Christian opposition to sacrifices, the Jewish view of sacrifices, Paul of Tarsus, Plato, Socrates, the soul, the nature of God,

¹⁰ Histoire ancienne de l'église, II, 4. ed., Paris, 1910, p. 46, note 3.

¹¹ Cf. Delehaye, Les passions des martyrs et les genres littéraires, Bruxelles, 1921, p. 143, note 2.

¹² Hist. eccles. (ed. Schwartz), viii, 9, 6-8.

¹³ Les passions des martyrs et les genres littéraires, pp. 435-437.

¹⁴ Cf. Hist. eccles., viii, 10, 2-10; reprinted in Knopf, Ausgewählte Märtyrerakten, Tübingen, 1913, pp. 95-96.

¹⁵ Hist. eccles., viii, 9, 6-8.

and the divinity of Christ — and although they represent opposite poles of religious thought, there is much show of reciprocal forbearance, and an absence of personal abuse which is most refreshing because so rare to the reader of the *Acta Sanctorum*.¹⁶ When Phileas, refusing to sacrifice to the gods, quotes the scriptural penalty of destruction, *nisi soli deo*, Culcian requests him to sacrifice to his one God (*immola ergo deo soli*).¹⁷ Later, when Phileas again refuses to sacrifice, Culcian asks if it is because of his conscience,¹⁸ an interesting admission on the part of a Roman magistrate, for it indicates a genuine attempt to understand the real nature of Christianity and the fundamental reason for objecting to the command to sacrifice. Culcian even expresses a certain admiration for Phileas, saying that he could have done hurt to Phileas in his own town, but that he forbore, because he wished instead to show him his kindly regard, to which Phileas responds in effect: 'Many thanks, but pray be bolder; do your duty, and make a martyr of me.'¹⁹ Culcian, who has thus far shown great patience, now becomes exasperated, and declares: "If I knew that you were in want and had therefore succumbed to this folly (Christianity), I would not spare you; but I know that you are very wealthy and capable of supporting not only yourself but almost the entire province—I therefore spare you and urge you to sacrifice."²⁰ Phileas persists in his refusal, the intervention of the attending lawyers (his pagan brother among them) effects a delay, and he is then subjected, as Eusebius also states,²¹ to the entreaties of relatives and friends: *advocati et officium uno cum curatore et cum omnibus propinquis eius pedes eius complectabantur, rogantes ut respectum haberet uxoris et curam susceperet liberorum*.²² Intercession is now made by Philoromus, prominent in the Egyptian imperial service, who makes an impassioned plea for Phileas's rights of conscience. The wrath of presiding magistrate and audience is now directed against Philoromus,

¹⁶ Cf. Acts of Phileas and Philoromus, cc. 1-2; in Knopf, pp. 97-100.

¹⁷ The hypothesis of Allard, that we have here a play of words (*soli deo, deo soli*) to denote the cult of the Sol invictus appears to be too ingenious. Cf. Allard, *La persécution de Dioclétien*, II, p. 106, note 1. Knopf (p. 97, l. 15) capitalizes *Soli*, thus accepting Allard's view. I prefer, with Tillemont (*Mémoires*, V, p. 207) the simpler and more obvious sense. Note, too, but a few lines further on (Knopf, p. 97, l. 28) the same combination of words, "*Deo soli in Jerosolyma*."

¹⁸ Cf. *Acta*, c. 1 (Knopf, p. 98, l. 20).

¹⁹ *Ibid.*, c. 2 (Knopf, p. 99, ll. 22-25).

²⁰ *Ibid.*, p. 100.

²¹ *Hist. eccles.*, viii, 9, 8.

²² *Acta*, c. 2 (Knopf, p. 100, ll. 15-18).

and in all probability an interrogatoire took place which the documentary tradition has unfortunately not preserved.²³ Culcian thereupon condemns both Phileas and Philoromus to suffer death by the sword.²⁴

Such in substance is the story of the martyrdom as transmitted to us by the *Acta*. The problem of the date of the events has called out divers conjectures on the part of scholars. Although all are agreed in assigning the *Acts* to the period of Maximinus Daja's rule in Egypt (from May 1, 305 until the summer of 313), accord as to the exact year is wanting. Tillemont²⁵ fixes the limits at from 306 to 311, and seems to prefer 310. Harnack,²⁶ Schmidt,²⁷ and more recently Cantarelli²⁸ and Delehaye²⁹ have decided for 305. Leclercq,³⁰ although he blunders in naming Culcian the successor of Hierocles as prefect of Egypt, seems right in dating the martyrdom at least a year later, namely in 306. Allard,³¹ with a certain show of reason, has determined upon 307. The facts involved in the problem are: (1) February 4th as the date of Phileas's death on the evidence of Jerome's *Martyrology*; ³² (2) the statement by Eusebius ³³ that both Phileas and Philoromus suffered martyrdom, but without any precise chronological indications; (3) the frequent reference in the *Acta* to Culcian as the trial judge and prefect of Egypt; ³⁴ (4) the information drawn from two *Oxyrhynchus papyri* to the effect that Culcian was prefect of Egypt in February 303 and May 305; ³⁵ (5) the existence of a joint letter of the bishops Phileas, Hesychius, Theodore, and Pachomius, written during their imprisonment and addressed to Melitius, bishop of Lycopolis, protesting against the latter's uncanoni-

²³ Cf. Tillemont, *Mémoires*, V, p. 208. Allard (*La persécution de Dioclétien*, II, p. 112, note 1) is assuredly wrong in holding that there was no interrogatoire of Philoromus, for that would have been contrary to all established usage. Cf. Geffcken in *Hermes*, 1910, p. 491.

²⁴ *Hist. eccles.*, viii, 9, 8; and *Acta SS. Phileae et Philoromi*, c. 3 (Knopf, pp. 100 f.).

²⁵ *Mémoires*, V, pp. 196, 209.

²⁶ *Die Chronologie der althristlichen Litteratur*, II, 2, p. 70.

²⁷ *Texte und Untersuchungen*, N. F., V, 1901, p. 22.

²⁸ *Mémoire d. R. Accademia dei Lincei*, XIV, 6, 1911, pp. 324 f.

²⁹ *Analecta Bollandiana*, XI, 1922, p. 26.

³⁰ *Les Martyrs: le troisième siècle, Dioclétien*, II, Paris, 1903, p. 290.

³¹ *La persécution de Dioclétien*, II, p. 105.

³² Cf. edition of De Rossi-Duchesne, *Martyrologium Hieronymianum* (Bruxelles, 1894), published as preface to vol. II, November, of the *Acta Sanctorum*.

³³ *Hist. eccles.*, loc. cit.

³⁴ *Acta SS. Phileae et Philoromi*, cc. 1-3, Knopf, pp. 97-101.

³⁵ *Pap. Oxyrh.* I, 1898, 71, p. 132; and *Pap. Oxyrh.* VI, 895; cf. Cantarelli, loc. cit.

cal ordinations in the diocese of Alexandria while the Alexandrian bishop, Peter, was absent in flight from the persecution;³⁶ (6) the condemnation and excommunication of Melitius by the ecclesiastical Council of Alexandria at Eastertide, 306;³⁷ (7) the evidence given in the "Palestinian Martyrs" of Eusebius to the effect that Aedesius, brother of the martyred Apphian (April 2, 306), endured much suffering, punishment, and torture for his faith shortly after (σμικρὸν τῷ χρόνῳ ὕστερον) Apphian's death, was then condemned to the mines, was released, and subsequently was martyred by the command of Hierocles, prefect of Egypt.³⁸ A consistent outline of the chronology of these data would be as follows: Phileas and his fellow bishops were imprisoned by Maximinus Daja toward the end of the year 305 (the year which marked the beginning of the Melitian schism), and addressed their joint letter to Melitius before Easter of 306; Phileas was brought for trial before Culcian, condemned, and executed at some time before Hierocles succeeded Culcian as prefect of Egypt. The latest date we have for Culcian's prefecture (on the basis of the papyri) is May 305, but for the martyrdom of Phileas and Philoromus this is not to be regarded as a terminus ad quem, as is done by Delehay³⁹ and Cantarelli,⁴⁰ but only as a terminus a quo. There is a double explanation for this: first, the papyrus evidence shows that Culcian held office during May 305, and probably for an indefinite period thereafter; secondly, the unanimous testimony of primary and secondary sources indicates that Phileas and Philoromus were martyred at the time when Maximinus Daja ruled Egypt, that is, between May 1, 305, and June 313. The real problem therefore is the date of Culcian's successor. Cantarelli⁴¹ designates a certain Eustratius as having been prefect of Egypt for the year 306, and assigns the prefecture of Hierocles to the year 307, supporting his argument by the conclusions of Schmidt,⁴² who had advanced the date of the martyrdom of Aedesius to the year 308. I am inclined to accept

³⁶ Migne, *Patrologia graeca*, X, coll. 1565-68; Routh, *Reliquiae sacrae*, III, 1846, pp. 381 ff.

³⁷ Athanasius, *Apologia contra Arianos*, 59, in Migne, *Patrologia graeca*, XXV, 356.

³⁸ Eusebius, *De mart. Palest.* (ed. Schwartz), 5, 2-3 (the shorter recension); and the longer recension (containing the Acta of Apphian and Aedesius) in *Analecta Bollandiana*, XVI, 1907, p. 127 (reprinted in Schwartz, op. cit., p. 919).

³⁹ *Analecta Bollandiana*, XL, 1922, p. 26.

⁴⁰ 'La serie dei Prefetti di Egitto,' in *Memorie d. R. Accad. dei Lincei*, XIV, 6, 1911, pp. 324 f.

⁴¹ *Ibid.* p. 325.

⁴² *Texte und Untersuchungen*, XX, 4, 1901, p. 48. Cf. Cantarelli, op. cit., p. 326.

Cantarelli's date of 307 for Hierocles as correct, but would reject his suggestion as to Eustratius, for the only evidence offered is the doubtful statement in the Synaxarium of Constantinople⁴³ to the effect that "this mortal trial of the saintly Christian martyrs Theodora and Didymus took place in the time of the ruler Diocletian and of Eustratius, prefect of Alexandria in Egypt." The notice from the Martyrologium Romanum (under date of April 28), which Cantarelli quotes as additional testimony, is to the same purport, but with the title of *praeses* for Eustratius instead of *praefectus*. Neither the notice from the Synaxary nor that from the Martyrologium Romanum is of independent value, for both are derived from the Acts of the martyrs Theodora and Didymus, which are entirely untrustworthy in their chronology, as the inclusion of Diocletian's name after May 1, 305, the date of his abdication, would indicate.⁴⁴ In the light of these considerations, and because the events narrated in the Acts of Phileas and Philoromus seem to have occupied a longer period of time, the suggested datings of 305 and 306 are to be rejected, and we should accept instead the year 307 as the date of the martyrdom of Saints Phileas and Philoromus.

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⁴³ Synaxarium eccles. Constantinop. (ed. Delchaye, as Propylaeum to Acta Sanctorum, November), p. 712, l. 14.

⁴⁴ This view I had already put in writing in July 1921. At that time Delchaye expressed himself to me as in full agreement with regard to the insufficiency of Cantarelli's proof for the establishment of Eustratius's prefecture in Egypt.

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